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# CATALOGUE

OF THE

# BIRDS

IN THE

# BRITISH MUSEUM.

VOLUME XX.

LONDON:

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CATALOGUE

OF THE

# PSITTACI, OR PARROTS,

IN THE

#### COLLECTION

OF THE

# BRITISH MUSEUM.

T. SALVADORI



#### LONDON:

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## PREFACE.

The collection of Parrots in the British Museum is not so extensive or complete as that of the families treated of in the preceding volumes. It was therefore particularly fortunate that for the preparation of the present volume the aid of Count Salvadori was secured, who combines with his great general experience a special acquaintance with the species in the Italian collections, which in some measure supplement that of the British Museum. I have great pleasure in acknowledging the conscientious care which he has bestowed on this, as on all his previous ornithological publications, and the attention which he has given to the purely curatorial part of the work.

ALBERT GÜNTHER,

Keeper of the Department of Zoology.

British Museum (N. H.), Dec. 13, 1891.



### INTRODUCTION.

In the spring of 1889 I was asked by Dr. Günther to undertake the volume of the Catalogue containing an account of the Parrots; and now, after more than two years and a half, my work is completed.

The materials I have had to deal with, although very large, and no doubt the most extensive existing in any Museum, are much less complete than those belonging to other groups of birds: and I do not consider them adequate either for affording a solid base to a general classification of Parrots, or for fully illustrating the different stages of many of the species.

The number of specimens contained in the British Museum is 5113, belonging to 450 species, whilst 49 are not represented in the Museum; so that the total number of species admitted in the present Catalogue is 499, of which 13 are now described for the first time \*. The number of apparently good species represented by their types is 108, besides 47 others now relegated to the synonymy. Out of these 5113 specimens 118 are osteological preparations, belonging to 53 species.

Owing to the liberality of Messrs. Hume and Godman and Salvin, the Indian and Mexican species are very complete; also the South-American series is very rich as regards the number of species; but the African, the Austro-Malayan, and especially the Australian series, are far from being complete, and often insufficient to give an idea of the different stages, of the sexual differences, or of the geographical distribution. Perhaps twice as many specimens are required, properly sexed and from reliable localities; skeletons of each species will also be required before the Collection can be considered sufficient for a complete study of Parrots.

\* There are also about 14 species and subspecies which I have not been able to identify; the descriptions of these will be found in footnotes at their proper places.

It is well known to Ornithologists that the Classification of Parrots has been a very difficult problem; and I am sorry to say that I cannot offer results which will settle the question. Those at which Mr. Garrod \* arrived are far from being satisfactory.

The classification I have followed in this volume agrees to a certain extent with that of Sundevall†, who divided the Parrots into Psittaci proprii and Psittaci orthognathi. As to the families, I have found that those admitted by Dr. Reichenow in his excellent 'Conspectus Psittacorum '# are the most natural and can be defined without much difficulty; in a few points I had to differ from him: I have withdrawn the genus Nestor from the Cacatuida, and made it the type of a distinct family, as has been already proposed by others; from the Cacatuidæ I have separated also the genus Dasyptilus and united it with the Psittacinae (restricted), although I am not quite sure about this being the right place. Moreover, the genera Polytelis, Ptistes, Aprosmictus, and Pyrrhulopsis, having a wellformed furcula, have been separated by me from the Platycercine and arranged with the Palaromithina, and the genera Pezoporus and Geopsittacus have been again united with the Platycercinee, leaving the genus Stringops only in the Stringopida. A peculiar feature in my classification is the establishment of the family Cyclopsittacida, which is not equivalent with Dr. Reichenow's Micropsittacine. The under surface of the hook of the bill without file-like sculpture in the species of the genera Neopsittacus and Cyclopsittacus separates them from all the other Psittaci proprii and approaches them to the Psittaci orthognathi; when the structure of their tongue is known, we shall be able to understand better their true affinities.

Although I think that the families and subfamilies admitted by me are fairly definable, I must confess that my arrangement does not bring us nearer to an understanding of the mutual or phylogenetic relations of the different families. A complete study of the internal structure of the Parrots will, perhaps, throw the requisite light on the subject.

<sup>\* &</sup>quot;On some Points in the Anatomy of the Parrots which bear on the Classification of the Suborder" (P. Z. S. 1874, pp. 586-598).

<sup>† &#</sup>x27;Methodi naturalis Avium disponendarum tentamen,' 1872, pp. 68-72.

<sup>‡</sup> Journal für Ornithologie, 1881.

I cannot finish these introductory remarks without acknowledging the great assistance I have derived from Dr. Finsch's work 'Die Papageien'; this is one of the best ornithological works which has ever been published, and the care bestowed by Dr. Finsch on the historical part of the species cannot be too highly appreciated. Unfortunately Dr. Finsch was misled in many cases by the idea that the sexes were alike. In my opinion, also, Dr. Finsch did not pay the necessary attention to the less conspicuous differences connected with geographical distribution, so that he often united species which are to be recognized as distinct.

I have to acknowledge also the assistance I have received from many friends, and to return them my best thanks; I wish particularly to mention Mr. Salvin, Dr. Sclater, Mr. Seebohm, Prof. Newton, Canon Tristram, the Hon. Walter Rothschild, Dr. Reichenow, Dr. Finsch, Dr. Meyer, Graf von Berlepsch, Dr. W. Blasius, Dr. Schauinsland, Dr. Stolzmann, Dr. Oustalet, and M. Sallé.

TOMMASO SALVADORI.

Turin, Zoological Museum, December 1891.

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### CATALOGUE

OF

# BIRDS.

# Order IV. PSITTACI.

Feet permanently zygodactyle by reversion of the fourth toe, covered with rugose granular scales or plates; bill short, extremely stout, strongly hooked or epignathous, and furnished with a cere (frequently feathered) as in the Birds of Prey. These are the two

most obvious characters which distinguish the Parrots.

Other important characters are the following:—Upper mandible movable, being articulated instead of suturally joined with the forehead; its lower surface often with transverse or oblique ridges, producing a file-like surface on the distal palatine portion. Tongue thick and fleshy, in some families peculiarly brushy or fringed. Orbital ring frequently complete by union of the lacrymal bones with postfrontal or postorbital process. Nasal septum extensively ossified. Palate desmognathous. Dorsal vertebræ opisthocœlous. Symphysis of lower jaw short and obtuse. Sternum generally fenestrated posteriorly. Furculum weak, sometimes defective or wanting. Lower larynx with three pairs of muscles.

Feathers with aftershafts. Spinal feather-tract on the neck well defined by lateral bare tracts and forked on the upper back. Tail-

feathers twelve, only in *Oreopsittacus* fourteen.

Oil-gland tufted, or wanting.

No cæca, and gall-bladder generally wanting.

Carotids, right and left both present and running deep in the vertebrarterial canal, or the right one deep and the left superficial, or only the left present (in *Cacatua*), as usual in birds.

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Ambiens muscle present and normal, or present and incomplete, or wanting altogether.

Deep plantar tendons galline.

Eggs white. Young helpless, hatched naked, but covered with down before acquiring feathers.

The affinities of the Parrots seem to be with the Owls and the Birds of Prey.

The Parrots principally inhabit tropical countries; but a few species extend as far as 40° or even 42° N. lat. and 55° S. lat.

### Key to the Families.

- Hook of the bill underneath nearly smooth, or only with some very superficial longitudinal ridges, but with no distinct filelike surface.
  - a. Bill longer than deep, much compressed; under mandible with the gonys nearly straight, or slanting in a gentle curve towards the tip (see figs. 1, 2, p. 3).

a'. Tongue fringed; culmen of the bill grooved along the middle ......

- b'. Tongue furnished with a kind of brush; culmen of the bill smooth, not grooved along the middle ....
- b. Bill deeper than long, much swollen on the sides; under mandible with the gonys strongly curved and abruptly ascending towards the tip (see fig. 3, p. 3); tongue unrecorded . . . . . . . . .
- II. Hook of the bill underneath with two lateral series of ridges, more or less transversal or oblique, producing a file-like surface (see figs. 4, 5, p. 3); tongue simple.

a. Sternum complete.

- U. Orbital ring mostly incomplete; if complete, without a process bridging the temporal fossa; head without a crest, except in the genus Nymphicus

b. Sternum incomplete, having only a rudimentary keel; orbital ring complete.

- 1. Nestoridæ, p. 4.
- 2. Loriidæ, p. 11.
- [p. 86. 3. Cyclopsittacidæ,

- . [p. 101. 4. Cacatuidæ,
- [p. 137. 5. Psittacidæ, [p. 599.
- 6. Stringopidæ,

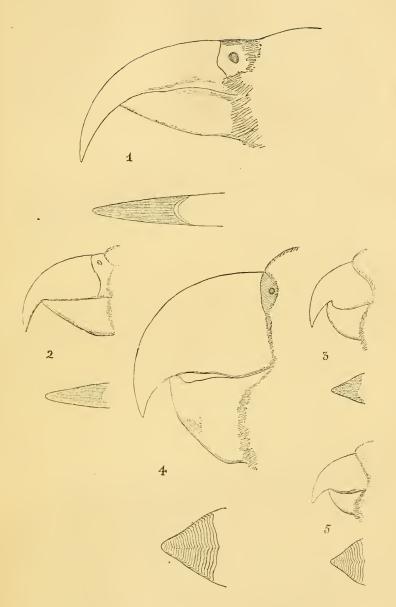


Fig. 1. Nestor notabilis. 2. Lorius lory. 3. Cyclopsittacus occidentalis. 4. Tanygnathus affinis. 5. Bolbopsittacus lunulatus.

# Family I. NESTORIDÆ.

Bill rather long, longer than deep; cere partly covered with hairy feathers; tongue with a delicate fringe of hairs at the tip; tail-feathers with the shafts pointed and projecting beyond the webs; feathers soft, those at the base of the lower mandible projecting forward, and hairy; tarsus rather long, like that of Stringops; orbital ring incomplete.

Only one genus, confined to the New Zealand subregion.

(Cf. Garrod, P. Z. S. 1872, pp. 787-789.)

#### 1. NESTOR.

Nestor (subgen.), Less. Tr. d'Orn. p. 190 (1831)	N. meridionális.
Nestor, Wagl. Mon. Psitt. p. 505 (1832)	N. meridionalis.
Centrourus, Sw. Class. B. ii. p. 303 (1837)	N. meridionalis.
Centrurus, Strickl. Ann. & Mag. N. H. vii. p. 34	
(1841).	

Range. New Zealand subregion.

### Key to the Species.

v z	
A. No yellow band across the breast.	
a. Underparts olive-brown, with no red tinge	
whatever; bill very long but not much	
curved	notabilis, p. 4.
b. Abdomen and under tail-coverts tinged with	
red	mevidionalis, p. 5.
B. A broad yellowish-white band across the breast.	
a. Bill not more than 2 inches long.	
a'. Larger; fore neck and upper breast hoary;	
wing 11.8 inches	esslingi, p. 8.
b'. Smaller; fore neck and upper breast light	
brown, with the feathers tinged with	7 1 0
yellow; wing 10·3 inches	productus, p. 9.
b. Bill extremely long (3.8 inches) and curved	
in a semicircle	norfolcensis, p. 10.

#### 1. Nestor notabilis.

Nestor notabilis, Gould, P. Z. S. 1856, p. 94; id. B. Austr. Suppl. pl. 60 (part iii., 1859); G. R. Gr. List Psitt. Brit. Mus. p. 100 (1859); id. Ibis, 1862, p. 230; Haast, Verh. z.-b. Gesell. Wien, 1863, p. 116; id. Ibis, 1864, p. 341; Gould, Handb. B. Austr. ii p. 554 (1865); Pelz. Verh. z.-b. Gesell. Wien, 1867, p. 318 (note); Finsch, Journ. f. Orn. 1867, p. 322; id. Papag. ii p. 898 (1868); Haast, Journ. f. Orn. 1868, p. 242, 1870, p. 331; Bull. Tr. & Pr. N. Zeal. Inst. iii. p. 52 (1870); Potts, ibid. p. 86 (1870); G. R. Gr. Hand-list, ii. p. 158, no. 8254 (1870); Hutt. Cat. B. New Zeal. p. 20 (1871); Sclat. P. Z. S. 1872, p. 795;

Finsch, Journ. f. Orn. 1872, p. 101; Bull. Birds N. Zeal. p. 52, pl. — f. ant. (1873); Garrod, P. Z. S. 1873, pp. 466, 633, 1874, p. 587; Rowley, P. Z. S. 1874, p. 497; Finsch, P. Z. S. 1874, pp. 170, 181; Garrod, P. Z. S. 1875, p. 343; Sharpe, Voy. Ereb. & Terr., Birds, App. p. 24 (1875); Gieb. Thes. Orn. ii. p. 701 (1875); Rehnw. Vogelbild. t. xviii. f. 4 (1878–83); id. Journ. f. Orn. 1881, p. 22 (Consp. Psitt. p. 22); Lorenz, Sitzb. Ak. Wissensch. Wien, lxxxiv. p. 630, t. iii. (1881); Latour, P. Z. S. 1881, p. 626; Finsch, Ibis, 1882, p. 398; Selat. List Vert. An. 8th ed. p. 338 (1883); Ibis, 1884, p. 471; Blas. Journ. f. Orn. 1884, p. 229; Bull. Birds N. Zeal. 2nd ed. i. p. 166, pl. xviii. (1888).

Adult. Dull olive-green, each feather edged with black; ear-coverts dusky; uropygium, under wing-coverts, and axillaries orange-red; quills dusky brown, the primaries with the outer web bluish, largely toothed on the inner web with bright lemon-yellow; secondaries greenish blue on their outer webs, toothed with orange-red on their inner webs; tail bluish olive, erossed near the extremity by a broad band of blackish brown; tail-feathers toothed on their inner webs with bright lemon-yellow; iris black; bill greyish brown; feet yellowish olive. Total length 19 inches, wing 12.5, tail 7.5, bill 1.75, tarsus 1.5.

Female. Similar to the male, but having the tints of the plumage

duller, and the dusky marking of the feathers broader.

Hab. South Island, New Zealand.

a. Ad. st.	New Zealand.	Gould Coll.
b. Ad. sk.	New Zealand.	Gould Coll.
c. Ad. sk.	New Zealand.	— Swinney [C.].
d, e. ♂♀ ad. sk.	Shedmorlich Peaks, S. Island.	Wellington Mus. E
f. Skeleton.	New Zealand.	Dr. J. Haast [P.].

#### 2. Nestor meridionalis.

Southern brown Parrot, *Lath. Gen. Syn.* i. p. 264, no. 70 (1781);

id. Gen. Hist. ii. p. 211 (1822).

Psittacus meridionalis, Gm. S. N. i. p. 333, n. 98 (1788) (ex Latham); Bechst. Lath. Uebers. p. 90 (1811); Strickl. Ann. &

Mag. N. H. vii. p. 34 (1841).

Psittacus nestor, Lath. Ind. Orn. i. p. 110, no. 85 (1790); Shaw, Gen. Zool. viii. 2, p. 522 (1811); Vieill. N. D. xxv. p. 317 (1817); id. Enc. Méth. iii. p. 1368 (1823); Kuhl, Consp. Psitt. pp. 12, 86 (1820); Steph. Gen. Zool. xiv. 2, p. 107 (1826); Less. Compl. de Buff. ix. Ois. p. 205 (1837); id. 2nd ed. p. 605, pl. —, f. 2 (1838); Bourj. Perr. pl. 68 (1838–39).

Psittaeus australis, Shaw, Mus. Lever. i. p. 85, pl. — (1792).

Nestor novæ zelandiæ, Less. Tr. d'Orn. p. 191 (1831).

Psittacus hypopolius, Forst. MS.; id. Icon. ined. t. 50; id. Descr.

An. p. 72 (1844).

Nestor hypopolius, Wagl. Mon. Psitt. pp. 505, 696 (1832); Gould, Syn. B. Austr. pl. — f. 2 (183-?); Selb. Nat. Libr., Parrots, p. 121, pl. 12 (1836); Hartl. Syst. Verz. Ges. Mus. p. 89 (1844); Rehb. Journ. f. Orn. 1853, p. 10; Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 250; id. Naumannia, 1856, Consp. Psitt. n. 263; Souancé, Rev. et Mag. de Zool. 1856, p. 223; G. R. Gr. List Psitt. Brit. Mus.

p. 99 (1859); Gould, B. Austr. Suppl. pl. 58 (part iii., 1859); Haast, Journ. f. Orn. 1864, p. 462; Gould, Handb. B. Austr. ii. p. 548 (1865); Sclat. P. Z. S. 1867, p. 473; Finsch, Journ. f. Orn. 1867, p. 322; Garrod, P. Z. S. 1872, pp. 787, 788, ff. 2, 3 (tongue), 1873, pp. 466, 633; Selat. P. Z. S. 1879, p. 300; id. List Vert. An. 8th ed. p. 338 (1883).

Centrourus australis, Sw. Class. B. ii. p. 303 (1837).

Nestor meridionalis, G. R. Gr. App. Dieff. N. Zeal. ii. p. 193 (1843); estor meridionalis, G. R. Gr. App. Dieft, N. Zeal, 11, p. 195 (1845); id. Voy. Ereb. § Terr. Birds, p. 9 (1844); Cass. U. St. Erpl. E.ep. p. 234 (1858); Ellman, Zool. 1861, p. 7467; Haast, Ibis, 1862, pp. 103, 104; G. R. Gr. Ibis, 1862, p. 229; Layard, Ibis, 1863, p. 241; Haast, Ibis, 1864, p. 345; Schley. Mus. P.-B., Psittaci, p. 156 (1864); Pelz. Verh. z.-b. Gesell. Wien, xvii. p. 318 (1867); Hutton, Ibis, 1867, p. 379; Finsch, Papag. ii. pp. 892, 961 (1868); Haast, Journ. f. Orn. 1868, p. 242; Finsch, Ibid.; id. Ibis. 1869, p. 379 (partim?); Hutton, Ibis. 1870, p. 394; ibid.; id. Ibis. 1869, p. 379 (partim?): Hutton, Ibis, 1870, p. 394; Potts, Tr. & Pr. N. Zeal. Inst. iii. p. 81, pl. vii. (nesting-places) (1870); G. R. Gr. Hand-list, ii. p. 158, n. 8252 (1870); Finsch, Journ. f. Orn. 1870, p. 327, 1872, p. 98; Sund. Meth. nat. av. disp. Tent. p. 72 (1872); Pelzeln, Ibis, 1873, p. 32 (Latham's type); Bull. B. New Zeal. p. 39, pl. — f. poster. (1873); Finsch, Journ. f. Orn. 1874, pp. 170, 179; Rowley, P.Z. S. 1874, p. 498; Ganzed, P.Z. S. 1874, p. 587; Gish. They, Orn. ii. p. 700 (1871) Garrod, P. Z. S. 1874, p. 587; Gieb. Thes. Orn. ii. p. 700 (syn. emend.?) (1875); Rowley, Orn. Misc. part i. pl. 4 (albino) (1875); Sharpe, Voy. Ereb. & Terr., Birds. App. p. 23 (1875); Bull. Tr. & Pr. N. Zeal. Inst. ix. p. 340 (1876); Hector, P. Z. S. 1876, pp. 2, 3; Moseley, Nat. Chall. p. 278 (1879); Rehnw. Vogelbild. t. xviii. f. 3 (1878-83); id. Journ. f. Orn. 1881, p. 20 (Consp. Psitt. p. 20); Finsch, Ibis, 1882, pp. 393, 397, 398; Meyer, Voyel-Skelett. i. Taf. xxiii. (1882); Salvin. Cat. Strickl. Coll. p. 464 (1882); Pelz. & Lorenz, Ann. d. naturh. Hofmus. 1888, p. 40; Bull. B. N. Zeal. 2nd ed. i. p. 150, pl. xvii. fig. aut. and post. (var.) (1888); Sandager, Tr. & Pr. N. Z. Inst. xxii. p. 288 (1890).
Nestor australis, G. R. Gr. Gen. B. ii. p. 426, n. 1 (1845); Bp.

Consp. i. p. 8 (1850); Pelz. Novara Reise, Vög. p. 100 (1865). Nestor notabilis, Bp. (nec Gould), Naumannia, 1856, Consp. Psitt.

no. 262 (teste Finsch, Papag. ii. p. 900).

### Southern form (N. montanus).

Nestor montanus, Haast in litt.; Finsch, Papag. ii. p. 961 (1868); Haast, Journ. f. Orn. 1868, p. 242; Bull. apnd Finsch, Journ. f. Orn. 1870, p. 328; G. R. Gr. Hand-list, ii. p. 159, n. 8255 (1870); Reisch, Tr. & Pr. N. Z. Inst. xvii. p. 195 (1884).

Nestor meridionalis, part., Finsch, Ibis, 1869, p. 379; id. Journ. f.

Orn. 1870, p. 327, 1872, p. 98, 1874, p. 179.

Nestor meridionalis, var. γ, Bull. B. New Zeal. p. 42 (1873); id. B. New Zeal. 2nd ed. i. p. 153 (1888).

Nestor occidentalis, Hector (nec Buller), fide Bull. B. N. Zeal. 2nd ed. i. p. 153 (1888). Nestor montana, Reisch. Tr. & Pr. N. Z. Inst. xxi. p. 379 (Steward

Island) (1889).

## South-western form (N. occidentalis).

Nestor occidentalis, Buller, Ibis, 1869, p. 40; G. R. Gr. Hund-list, ii. p. 59, n. 8256 (1870); Buller, Ibis, 1870, p. 457; Hutt. Cat.

N. Zeal, Birds, p. 20 (1871); Bull. B. New Zeal, p. 50 (1873); Finsch, Tr. & Pr. N. Zeal. Inst. v. p. 207 (1872); Bull. ibid. p. 405 (1872); Hutt. Ibis, 1874, p. 35 (=meridionalis); Buller, Ibis, 1874, p. 113 (=meridionalis); Sharpe, Voy. Ereb. & Terr., Birds, App. p. 24 (1875); Rehnw. Journ. f. Orn. 1881, p. 392 (Consp. *Psitt.* p. 227).

? Nestor meridionalis, Finsch (nec Gm.:), Ibis, 1869, p. 379.

Nestor meridionalis, var.  $\mu$ , Bull. B. New Zeal, 2nd ed. i. p. 157 (1888).

Nestor, sp. n., an occidentalis, Reischek, Tr. & Pr. N. Zeal. Inst. xvii. pp. 194, 195 (1884).

### Yellowish-red variety (N, superbus).

Nestor esslingi Haast (nec Souancé), Verh. z.-b. Gesell. Wien, 1863,

p. 116; id. Ibis, 1864, p. 341.

Nestor superbus, Bull. Essay on the Orn. of N. Zeal. p. 11 (1865);

Taylor, Ann. & Mag. N. H. (3) xviii. p. 14 (1866); Finsch.

Journ. f. Orn. 1867, pp. 322, 344; id. Papag, ii. p. 902 (1868); Haast, Journ. f. Orn. 1868, p. 243; Finsch, Journ. f. Orn. 1870, p. 331; G. R. Gr. Hand-list, ii. p. 159, n. 8257 (1870); Rowley, P. Z. S. 1874, p. 498; Gieb. Thes. Orn. ii. p. 701 (1875); Rehnw. Journ. f. Orn. 1881, p. 20 (Consp. Psitt. p. 20); id. Vogelbild., Nachtr. n. 2 (1883).

Nestor meridionalis, var. a, Bull. B. New Zeal. p. 40 (1873): Kirk, Tr. & Pr. N. Zeal. Inst. xvii. p. 62 (1884); Bull. B. New Zeal. 2nd ed. i. p. 151 (1888).

Nestor meridionalis, Kirk, Ibis, 1888, p. 45.

Adult. Upper surface olive-brown, each feather margined with dark brown; crown of the head and nape hoary, slightly tinged with bluish and with a narrow edging of brown to each feather; ear-coverts washed with golden yellow; feathers of the cheeks and front of the throat hoary, bordered with brown and washed with red at the base of the bill; below the nape an orange and dull red band, each feather tipped with three semicircles—dull red, orange, and brown; uropygium, upper tail-coverts, abdomen, and under tail-coverts dark red; breast-feathers hoary edged with brown; under wing-coverts red, sometimes washed with orange, and crossed with narrow dusky bands; quills toothed on their internal webs with pale red; tail above olive-brown, with an indistinct brown band near the tip; tail-feathers toothed on the inner webs with red: iris dark brown; bill dark bluish grey; feet bluish grey, soles of feet yellowish brown. Total length 18.5 inches, wing 11, tail 7. bill 1.6, tarsus 1.2.

Young. "The scarlet lining of the under surface of the wings is marked by numerous transverse bars of dusky brown, and towards the carpal edges the feathers are olivaceous brown, barred and margined with orpiment-orange; the long soft feathers underlying the secondaries are dusky grey, with faint bars of scarlet; in some examples the nuchal collar is very indistinct, being simply indicated by a tinge of yellow, while in others it is fully as conspicuous as in the adult." (Buller.)

Hab. New Zealand.

The bird from South Island has been separated under the name of Nestor montanus; it was distinguished as being larger and generally much brighter coloured than the bird from North Island. Sir W. Buller does not now recognize it as distinct. Owing to the want of a good series of specimens, properly sexed and from reliable localities, I have not been able to make up my mind on the subject; for this reason I have kept the synonymy of the two forms

The bird from George Sound to Milford Sound, on the west coast of the South Island, has been separated under the name of Nestor occidentalis; this form is only known from the two original specimens obtained by Dr. Hector. The characters by which this form was distinguished from N. meridionalis are the smaller dimensions, the slender bill with the upper mandible produced to a finer point, and the absence of spots on the inner webs of the tail-feathers. The dimensions attributed to it are:—"Total length 16.5 inches, wing 10.5, tail 6, tarsus 1; bill, following curvature 2.25, along edge of lower mandible 1.5" (Baller). Herr Reischek, who advocates very strongly the distinction of the Nestor from the Sounds, says that while the male is fiery red under the wings, the female is golden yellow. The validity of this species is now rejected even by Sir W. Buller; and not having myself seen a specimen of this form, I have referred it to N. meridionalis, although I have kept the synonymy separate.

Nestor superbus no doubt is a yellowish-red variety of N. meri-

dionalis.

a. Imm. (?) sk. New Zealand. Capt. Cook's Voyage. b. Ad. sk. New Zealand. Pamplin Coll. New Zealand. *c–f.* Ad. sk. Purchased. New Zealand. Sir G. Grey [P.]. *g*, *h*. Ad. sk. New Zealand. Dr. A. Sinclair, R.N. i, k. Ad. sk. [P.]. Capt. Stokes [P.]. New Zealand. Gould Coll. p. Ad. sk. New Zealand. Tweeddale Coll. q. Ad. sk. Dunedin, South Island. Hume Coll.  $\hat{r}$ . Young sk. s. Skeleton. South Island, N. Zealand. Sir W. Buller [P.].

## 3. Nestor esslingi.

Nestor novæ zelandiæ, Bp. (nec Less.), Rev. et Mag. de Zool. 1854,

p. 155, n. 251 (sine descr.).

Nestor esslingi, Souancé, Rev. et Mag. de Zool. 1856, p. 223; Bp. Naumanniu, 1856, Consp. Psitt. n. 264; Gould, B. Austr. Suppl. pl. 59 (part iii., 1859); G. R. Gr. List Psitt. Brit. Mus. p. 100 (1859); id. Ibis, 1862, p. 230; Gould, Handb. B. Austr. ii. p. 552 (1865); Finsch, Journ. f. Orn. 1867, p. 322; id. Papag. ii. p. 896 (1868); G. R. Gr. Hand-list, ii. p. 158, n. 8253 (1870); Finsch, Journ. f. Orn. 1870, p. 331; Bull. Tr. & Pr. N. Zeal. Inst. iii. p. 49 (1870); Hutt. Cat. B. New Zeal. p. 20 (1871);

Finsch, Tr. & Pr. N. Zeal. Inst. v. p. 207 (1872); Rowley, P. Z. S. 1874, p. 498; Rehnw. Vogelbild. t. xviii. f. 5 (1878-83); id. Journ. f. Orn. 1881, p. 21 (Consp. Psiit. p. 21). Nestor meridionalis, var., Buller, Tr. & Pr. N. Zeal. Inst. iii. p. 51

(1870).

Nestor meridionalis, part., Finsch, Journ. f. Orn. 1872, p. 98. Nestor meridionalis, var.  $\beta$ , Bull. B. New Zeal. p. 41 (1873); id. op. cit. 2nd ed. i. p. 152 (1888).

Type. Very much like N. meridionalis, from which it differs principally in having a broad yellowish-white band between the grey upper breast and the dull red abdomen; besides, the ear-coverts behind are of a bright golden yellow, the cheeks below bright red, and the tail-feathers towards the base of the inner web do not show the spots, which more or less are always present in N. meridionalis, Total length 18 inches, wing 11.8, tail 6.5, bill 2.1, tarsus 1.2.

Hab. Unknown.

This bird is intermediate between N. meridionalis and N. produetus; it resembles the first in the dimensions and in the upper parts, and the second in the underparts, especially on account of the broad yellowish-white band across the breast. Although considered by Sir W. Buller as an individual variety of N. meridionalis, I feel inclined to agree with Gould and Finsch in regarding it as a distinct species.

a. Ad. sk.

Massena Coll. (Type of species.)

## 4. Nestor productus.

Wilson's Parrakeet, Lath. Gen. Hist. ii, p. 170 (1822). Plyctolophus productus, Gould, P. Z. S. 1836, p. 19.

Nestor productus, Gould, Syn. Austr. B. and adj. Isl. pt. i. pl. -. f. 1 (183—?); Bourjot, Perr. pl. 69 (1837–38); Gould, B. Austr. N. 1 (169-1); Boar Jol, Terr. ph. 63 (1831-38); Goldad, B. Ausstr. v. pl. 6 (part v., 1841); G. R. Gr. Gen. B. ii. p. 426, n. 2 (1845); Rehnb. Vög. Neuholl. n. 187 (1850); Bp. Consp. i. p. 8 (1850); Rehnb. Journ. f. Orn. 1853, p. 10; Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 252; Souancé, Rev. et Mag. de Zool. 1856, p. 224; Selat. Pr. Linn. Soc. 1858, p. 132; G. R. Gr. List Psitt. Brit. Mag. 100 (1850); Selat Journ. f. Our. 1860, p. 241, Pol. Mag. 100 (1850); Selat Journ. Mus. p. 100 (1859); Sclat. Journ. f. Orn. 1860, p. 34; Pelz. Verh. k. Ak. Wissensch. Wien, xli. pp. 322–325, Taf. — ff. 2, 3 (head, 4, 5 (tongue) (1860); Schleg. Journ. f. Orn. 1861, p. 377; G. R. Gr. Ibis, 1862, p. 230 (syn. emend.); Schleg. Dierent. p. 84 (with figure) (1864); id. Mus. P.-B., Psitt. p. 157 (1864): Gould, Handb. B. Austr. ii. p. 550 (1865); Finsch, Journ. f. Orn. 1867, p. 322; Finsch, Papag. ii. p. 888 (1868); Newt. Ibis, 1869, p. 323; Selys-Longch. Ibis, 1870, p. 450 (Mus. of Florence): G. R. Gr. Hand-list, ii. p. 159, n. 8258 (1870): Rowley, P. Z. S. 1874, p. 497; Gieb. Thes. Orn. ii. p. 701 (1875); Ibis, 1877, p. 129 (spec. in Turati's Mus.); Relowe. Vogelbild. t. xviii. f. 6 (1878-18); id. Journ. f. Orn. 1881, p. 21 (Consp. Psitt. p. 21): Salvad. Ibis, 1881, p. 609; Salv. Cat. Strickl. Coll. p. 463 (1882); ? Layard, Ibis, 1884, p. 123 (egg!): Bull. B. New Zeal. 2nd ed. i. p. 164 (1888); Ibis, 1888, p. 650; Ramsay, Tab. List, p. 38 (1888). Centrurus productus, Ep. Naumanniu, 1856, Consp. Psitt. n. 265.

Adult. Upper surface brown, the feathers margined with a deeper tint; crown paler, neck all round tinged with yellowish; uropygium and upper tail-coverts dull red; checks and throat reddish; on the breast a broad cross-band of a yellowish-white colour; abdomen and under tail-coverts ochreous red; wings brown with a slight tinge of green; middle wing-coverts slightly edged with yellowish; quills, towards the base of the inner web, toothed with pale yellowish red; under wing-coverts yellow, the inner ones and the axillavies orange-red; tail brown, greenish towards the base; tail-feathers towards the base of the inner web toothed with pale red: iris dark brown; bill brown; nostrils, bare skin round the eye, and feet dark olive-brown. Total length 15 inches, wing 10·3, tail 5·6, bill 2, tarsus 1·2.

Hab. Philip Island.

The length of the bill varies a good deal, from 1.6 to 2 inches.

a, b. Ad. sk. c. Ad. sk.

Philip Island. Philip Island. Purchased. Bell Coll.

### 5. Nestor norfolcensis.

Long-billed Parrakeet, Lath. Gen. Hist. ii. p. 171 (1822).

Nestor norfolcensis, Pelz. Sitzb. k. Akad. Wissensch. xli. pp. 322–325, Taf. — (1860); Ibis, 1860, p. 422; Finsch, Journ. f. Orn. 1867, p. 323 (note); Finsch, Papag. ii. p. 900 (1868); id. Ibis, 1869, p. 379; G. R. Gr. Hand-list, ii. p. 159, n. 8259 (1870); Gieb. Thes. Orn. ii. p. 701 (1875); Rehnw. Journ. f. Orn. 1881, p. 21 (Consp. Psitt. p. 21): id. Vogelbild., Nachtr. n. 3 (1883): Pelz, & Lorenz, Ann. d. naturh. Hofmus. 1888, p. 39; Buller, B. N. Zeal. 2nd ed. i. p. 164 (1888).

Nestor productus, part., G. R. Gr. Ibis, 1862, p. 230.

"Length above twelve inches. Bill very long and curved, thick halfway from the base, but tapering to a point at the tip, and under mandible truncated at the end; colour of both dusky; head and neck dull green; sides [of the head] under the eyes, chin, and throat pale crimson; upper parts of the body, wing, and tail dusky; breast yellowish; belly, thighs, and vent more or less crimson; tail cuneiform; legs brown." (Latham.)

Hab. Norfolk Island.

This bird is now extinct, and is only known from Latham's description, and from the description and figure of the head published by von Pelzeln. Latham described a specimen which was in the possession of Governor Hunter; and von Pelzeln found a figure of this bird among the papers left by the traveller Ferdinand Bauer, who visited Norfolk Island. Besides the very eurious shape of the bill, the absence of any bars on the tail distinguishes this species from the others.

## Family II. LORIIDÆ.

Bill much compressed, generally longer than deep, not notched, and smooth; culmen rounded and narrow; lower mandible rather long, with the gonys narrow, straight, and obliquely slanting upwards, not flattened in front and with no keel-like ridge: upper mandible with no file-like surface on the under surface of the hook. Tongue brushy. Cere broader over the culmen and gradually becoming narrower along the sides of the bill. Tail graduated or rounded, sometimes even, rarely longer than the wings, generally shorter. Wing acute, with the three first quills generally the longest.

Range. Australian Region (except New Zealand, but including

Polynesia).

Čf. Weinland, "Ueber Pinselzungen der Papageien" (Journ. f. Orn. 1853, Extrah. p. lxix, Taf. ii. ff. 1-9); Wallace, "Correction of an Important Error affecting the Classification of the Psittacide" (Ann. & Mag. N. H. (3) iii. pp. 147, 148, 1859).

### Key to the Genera.

Try to the Street
I. Tail-feathers 12; point of the maxilla long, but not thin.
"Tail rather short and nearly square; the two middle tail-feathers shorter than the lateral ones; feathers of the hind neck long and [p. 41.
b. Tail moderate or very long, the two middle
tail-feathers always longer than the lateral ones.
a'. Tail-feathers rather broad and more or
less rounded at the tip.
a". Dimensions larger; about the size of a
Turtle-dove.
a'''. Bill black, like the cere and the [p. 12.
naked chin 1. CHALCOPSITTACUS,
$b^{\prime\prime\prime}$ . Bill orange-red.
a <sup>4</sup> . Red colour predominant also on
the wings 2. Fos, p. 18.
<i>b</i> <sup>4</sup> . Wings green 3. Lorius, p. 31.
b". Dimensions smaller, larger than those
of a Sparrow; feathers of the crown
long and shaft-streaked.
c'''. The first three or four primaries
notched at the tip; general colour
green
d". General colour blue; no red or green
colour in the plumage 6. Coriphilus, p. 46.

b'. Tail-feathers gradually tapering to a	
point, more or less acute.	
c". Predominant colour underneath as	
well as above green.	
e'''. Tail-feathers green, with no yellow	
or red colour at the tip; tail mode-	
rate; the two middle tail-feathers	
not very long; 4 or 5 first primaries	
not distinctly attenuated towards the tips.	
a. Shaft-streaks more or less blue	
on the forehead (as on the rest	
of the head); breast generally	[p. 49,
tinged with red	7. Trichoglosses,
β. Like Trichoglossus, only differing	,
in colour; no blue shaft-streaks	
on the forehead, and no red	
colour on the breast; head yel-	
lowish or bluish green: bill	[p. 63.
orange-red	8. Psitteuteles,
γ. Predominant colour green, with	F 00
shaft-streaks on the neck and	[p. 66,
body: bill orange-red	9. Ptilosclera,
δ. First primary equal or a little lon-	
ger than the second and the	
third; predominant colour green; bill black; dimensions rather	Γn 67
small	10. GLOSSOPSITTACUS,
f'''. Tail-feathers green, with the tips	[p. 72.
yellow or red	
d". Predominant colour on the head,	,
neck, and lower parts red.	
g'''. The two middle tail-feathers not	
much longer than the lateral	
ones; the primaries not abruptly	[p. 79.
attenuated towards the tips	12. Charmosynopsis,
h". The two middle tail-feathers gene-	
rally much longer than the lateral	
ones, and very narrow towards the	
tip; the primaries, especially the	Γn 81
first 4 or 5, abruptly attenuated towards the tips	[p. 81.]
II. Tail-feathers 14; point of the maxilla very	[p. 84.
long and thin; bill black	14. Oreopsittacus.
,	,
1. CHALCOPSITTACUS	S. /
Chalcopsitta, Bp. Consp. Gen. Av. i. p. 3 (1849)	Type. 9) C. ater.
Chalcopsittacus, Salvad. Ann. Mus. Civ. Ge	
(1876) (nomen emend.).	P. 25
Range. Papuan Islands.	
zamy. z upani ismino.	

Key to the Species.

I. No green colour whatever.
a. Black, more or less purple.
a'. Abdomen like the breast black.

chloropterus, p. 17.

 $\alpha''$ . Quills with no red on the inner web. ater, p. 13. bernsteini, p. 14. b''. Quills with the base of the inner web red. insignis, p. 15. b'. Abdomen red . . . . . . . stavorini, p. 15. b. Olive-brown; forehead, a band from the lores encircling the throat, tibiæ, and under wingcoverts orange-yellow..... duyvenbodei, p. 16. . Green, with green and yellow streaks along the shaft of the feathers; forehead (in the adult bird) and tibiæ red. e'. Under wing-coverts and axillaries red; feathers of the hind neck with the shaftscintillatus, p. 16. streaks mostly orange-yellow ...... d'. Under wing-coverts and axillaries mostly green and red, sometimes entirely green; feathers of the hind neck with the shaft-

### 1. Chalcopsittacus ater.

streaks mostly green .....

Le Lori noir de la Nouvelle Guinée, Sonner. Voy. à la Nouv. Guin. p. 175, pl. 110 (1776).

Blâck Lory, Lath. Syn. i. p. 221, n. 23 (1781); id. Gen. Hist. ii. p. 139 (1822).

Psittacus ater, Scop. Del. Flor. et Faun. Insubr. ii. p. 87, n. 29 (1786)

(ex Sonnerat).

Psittacus novæ guineæ, Gm. S. N. i. p. 319, n. 63 (1788) (ex Sonnerat); Lath. Ind. Orn. i. p. 91, n. 27 (1790); Shaw, Gen. Zool., viii. 2, p. 451 (1811); Bechst. Kurze Uebers, p. 71 (1811); Vieil., N. D. xxv. p. 335 (1817); Xuh, Consp. Psitt. p. 42 (1820); Vieil.

N. D. xxv. p. 335 (1817); Kuhl, Consp. Psitt. p. 42 (1820); Vieill. Enc. Méth. p. 1379, pl. 222. f. 3 (1823); Desm. Dict. Sc. Nat. xxxix. p. 61 (1826); Voigt, Cuv. Uebers. p. 335 (1831); S. Müll. Verh. Land- en Volkenk. p. 107 (1839-1844).

Le Lori noir, Levaill. Perr. pl. 49; Less. Compl. de Buff., Ois. 2nd ed. p. 605 (1838).

Lorius novæ guineæ, Steph. Gen. Zool. xiv. p. 132 (1826). Platycercus novæ guineæ, Wagl. Mon. Psitt. p. 534 (1832). Platycercus ater, G. R. Gr. Gen. B. ii. p. 408, n. 23 (1846).

Chalcopsitta novæ guineæ, Bp. Consp. Av.i. p. 3 (1849); id. P. Z. S. 1850, p. 26; id. Rev. et May. de Zool. 1854, p. 156, sp. 290; id. Naumaunia, 1856, Consp. Psitt. sp. 304; G. R. Gr. P. Z. S. 1858, p. 194; id. P. Z. S. 1861, p. 436; Rosenb. Journ. f. Orn. 1862, pp. 63, 67; id. Nat. Tijdschr. Ned. Ind. xxv. p. 142 (1863).

Châlcopsitta atra, Sclat. Journ. Pr. Linn. Soc. ii. p. 165, sp. 110 (1858); id. P. Z. S. 1860, p. 227; G. R. Gr. P. Z. S. 1861, p. 436; Rosenb. Nat. Trjdschr. Ned. Ind. xxv. p. 224, sp. 9 (1863); id. Journ. f. Orn. 1864, p. 113, sp. 9; Wall. P. Z. S. 1864, pp. 289, 294; G. R. Gr. Hand-list, ii. p. 153, sp. 8191 (1870); Salvad. Ann. Mus. Civ. Gen. vii. p. 760 (1875); Tristr. Cat. Coll. B. p. 73 (1889).

Eos ater, G. R. Gr. List Psitt. Brit. Mus. p. 53 (1859); id. P. Z. S. 1860, p. 357.

Eos atra, G. R. Gr. Cat. B. New Guin. pp. 40, 59 (1859); Wall. Ibis, 1861, p. 291; Schleg. Dievent. p. 68 (1864).

Lorius ater, Schleg. Mus. P.-B., Psittaci, p. 129 (1864); Finsch, Neu-

Guin. p. 158 (1865); Schleg. Mus. P.-B., Psittaci, Revue, p. 59

(1874); Gieb. Thes. Orn. ii. p. 500 (1875).

Domicella atra, Finsch, Paprig. ii. p. 755 (1868); id. P. Z. S. 1869, p. 127; Meyer, Sitzb. k. Ak. Wissensch. Wien, lxx. p. 237 (1874); id. Sitzb. Isis, Dresd. 1875, p. 78; Rehnw. Journ. f. Orn. 1881, p. 165 (Consp. Psitt. p. 101).

Chalcopsittacus ater, Salvad. Ann. Mus. Civ. Gen. x. p. 34, n. 73, p. 122 (1877); id. Orn. Pap. e Mol. i. p. 269 (1880); Rehnw. Vogelbild. t. xi. f. 5 (1878-83); Guillem. P. Z. S. 1885, p. 622 (Salwatty, Mysol); Salvad. Ibis, 1886, p. 155; id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 170 (1889).

Adult. Black, with a slight tinge of purple; head black; uropygium, upper and under tail-coverts dark purple-blue; tail above greyish purple, towards the tip greyish olive, underneath dark red towards the base, golden olive at the tip: bill, cere, and feet black: iris maroon with an inner ring white. Total length 13.50 inches, wing 7.5, tail 5.3, bill 1.05, tarsus 0.85.

Hab. Western New Guinea, from Dorei-Hum and Has (Beccari)

to Sorong; Salwatty, Batanta; perhaps also Waigiou.

New Guinea. A. R. Wallace Coll. a, b, c. Ad. sk. New Guinea (Dr. A. B. Meyer). Gould Coll. d. 3 ad. sk. var.

Tweeddale Coll. e. Ad. sk. New Guinea. Tweeddale Coll. Sorong, New Guinea. f. Ad. sk. A. R. Wallace Coll. Salwatty. g. Ad. sk.

### 2. Chalcopsittacus bernsteini.

Chalcopsitta novæ guineæ (part.), G. R. Gr. P. Z. S. 1858, p. 194; id. P. Z. S. 1861, p. 436; Rosenb. Journ. f. Orn. 1862, pp. 63, 67;

id. Nat. Tijdschr. Ned. Ind. xxv. p. 142 (1863).
Chalcopsitta atra (part.), Sclat. P. Z. S. 1860, p. 227; G. R. Gr. P. Z. S. 1861, p. 436; Rosenb. Nat. Tijdschr. Ned. Ind. xxv. p. 224; id. Journ. f. Orn. 1864, p. 113; Wall. P. Z. S. 1864, p. 289; G. R. Gr. Hand-list, ii. p. 153, n. 8191 (1870): Salvad. Ann. Mus. Civ. Gen. vii. p. 760 (1875).

Chalcopsitta bernsteinii, Rosenb. Journ. f. Orn. 1861, p. 46 (Mysol). Lorius ater (part.), Schleg. Mus. P.-B., Psittaci, p. 129 (1864); id.

Mus. P.-B., Psittaci, Řevue, p. 59 (1874).

Domicella atra (part.), Finsch, Papag. ii. p. 755 (1868). Chalcopsittacus ater (part.), Salvad. Ann. Mus. Civ. Gen. x. p. 34, no. 73 (1877); id. Orn. Pap. e Mol. i. p. 269 (1880); Guillem. P. Z. S. 1885, p. 622 (Mysol); Salvad. Ibis, 1886, p. 155; id. Mem. R. Ac. Sc. Tor. (2) xl. p. 170 (1889).

Adult. Similar to the adult of C. ater, but it differs in having the tibiæ dark red, and the edge of the forehead usually tinged with the same colour.

Hab. Mysel.

Wallace Coll. Mysol. a, b, c. of ad.; d. Juv. sk. Gould Coll. Mysol (A. R. Wallace). c. Ad. sk. Mysol (A. R. Wallace). Purchased. f. 2 ad. sk. Kesim, Mysol. Purchased. Ad. sk.

## 3. Chalcopsittacus insignis.

Chalcopsitta insignis, Oust. Assoc. Sc. de France, Bull. no. 533, p. 247 (1878); Salvad. Atti R. Ac. Sc. Tor. xiii. p. 312 (note) (1878).

Chalcopsittaeus bruijnii, Salvad. Atti R. Ac. Sc. Tor. xiii. p. 310

(1878); id. Ibis, 1879, p. 105. Chalcopsittacus insignis, Salvad. Orn. Pap. e Mol. i. p. 272 (1880); id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 171 (1889).

Domicella insignis, Rehnw. Journ. f. Orn. 1881, p. 165 (Consp. Psitt.

p. 101); id. Vogelbild., Nachtr. 39 (1883).

Adult. Purple-black; pileum darker, nearly black; forehead and checks tinged with red; concealed part of the feathers of the neck und of the breast red; tibiæ red; uropygium dark blue; scapulars purple-brown; the edge of the wing and the under wing-coverts red; quills with the base of the inner web red; tail above violet, with the base brown, and towards the tip greyish, beneath purplered, towards the tip golden olive-yellow: bill, cere, naked skin of the chin, and feet black. Total length 11 inches, wing 7, tail 4.87, bill 0.94, tarsus 0.78.

Hab. Amberpon Island, Geelvink Bay.

## 4. Chalcopsittacus stavorini.

Psittacus stavorini, Less. Voy. Coq., Zool. i. p. 355 (1826), p. 628 (1828); Desm. Dict. Sc. Nat. xxxix. p. 60 (1826); Salvad. Ibis, 1879, p. 106.

Eclectus paragua, part., G. R. Gr. Gen. B. ii. p. 418, n. 3 (1845). Stavorinius paraguanus, part., Bp. Consp. Av. i. p. 4 (1849).

Stavorinus paragua, Bp. Naumannia, 1856, Consp. Psitt. sp. 259. Psittacodis stavorini, Sclat. Journ. Pr. Linn. Soc. ii. p. 165, n. 114 (1858); id. P. Z. S. 1860, p. 227; Rosenb. Journ. f. Orn. 1862, p. 63; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 143, 226 (1863); Bernst. Nat. Tijdschr. Ned. Ind. xxvii. p. 296 (1864); Rosenb. Journ. f. Orn. 1864, p. 115, sp. 23.

Eclectus paraguanus, G. R. Gr. List Psitt. Brit. Mus. p. 67 (1859);

id. Cat. B. New Guin. pp. 40, 59 (1859).

Eclectus stavorini, Wall. P. Z. S. 1864, p. 286; Gieb. Thes. Orn. ii. p. 76 (1875).

Lorius stavorini, Finsch, Neu-Guin. p. 158 (1865).

Domicella stavorini, Finsch, Papag. ii. p. 758 (1868); Rehnw. Journ. f. Orn. 1881, p. 165 (Consp. Psitt. p. 101).

Psittacodis stavorinus, G. R. Gr. Hand-list, ii. p. 154, sp. 8197

(1870).

Chalcopsittacus stavorini, Salvad. Ann. Mus. Civ. Gen. x. p. 34, no. 74 (1877); id. Orn. Pap. e Mol. i. p. 273 (1880); id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 11 (1889).

Shining black; abdomen red; size of Lorius lory.

Hab. Waigiou.

No specimen of this species exists in any museum; there is some probability that it was described from memory, as the typical specimen was lost. I have entertained some suspicion as to its being identical with C. insignis, Oust.

## 5. Chalcopsittacus duyvenbodei.

Chalcopsittacus duyvenbodei, Dubois, Bull. Mus. Roy. d'Hist. Nat. Belg. iii. p. 113, pl. v. (1884); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 170 (1889).

Adult. Dark brown-olive; forehead, a band starting from the lores, and encircling the naked skin of the cheeks and throat orangeyellow, like the smaller wing-coverts near the bend of the wing, the tibiæ, the under wing-coverts, and the inner webs of the quills towards the base; vertex and occiput dusky olive-brown; nape and sides of the neck covered with narrow and long feathers, ochreyellow along the middle; lower back, rump, and under tail-coverts violet-blue; car-coverts, hind part of the cheeks, lower part of the throat, and the whole breast olive-brown, the feathers of the breast yellowish on the edges, and with the hidden part yellow; primaries and their coverts black; tail dull purple, the feathers with an olive tinge on their edges, underneath golden-olive: bill, cere, naked skin round the eyes, and on the throat and feet black. Total length about 12 inches, wing 7, tail 5.3, bill 0.95, tarsus 0.78. (Rothschild Coll.)

Hab. New Guinea (Duyvenbode). n coast.

Only two specimens are known, the type in the Museum of Brussels, received from Mr. Duyvenbode, and the one in the Rothschild Collection.

# 6. Chalcopsittacus scintillatus.

Amber Parrot, Lath. Syn. i. Suppl. p. 65, n. 144 (1787); id. Gen. Hist. ii. p. 252 (1822).

Psittacus batavensis (!), Lath. (nec Wagl.), Ind. Orn. i. pp. 126, 128 (1790); Bechst. Kurze Uebers. p. 101 (1811); Vieill. N. D. xxv. p. 375 (1817); Kuhl, Consp. Psitt. p. 99 (1820); Vieill. Enc. Méth. p. 1406 (1823).

Psittacus scintillatus, Temm. Pl. Col. 569 (juv.) (1835) (type ex-

amined); id. Tabl. Méth. p. 61 (1839).

Lorius scintillatus, Bourg. Perr. pl. 51 (1837-38); Hombr. et Jacq. Ann. Sc. Nat. xvi. p. 317 (1841); Schleg. Mus. P.-B., Psittaci, p. 122 (1864); Finsch, Neu-Guin. p. 158 (1865); Schleg. Mus. P.-B., Psittaci, Revue, p. 56 (1874); Gieb. Thes. Orn. ii. p. 502 (1875); Rosenb. Malay. Arch. p. 371 (1879).

Psittacus scintillans, S. Müll. Verh. Land- en Volkenk. pp. 22, 127 (1839 44).

Eos scintillata, G. R. Gr. Gen. B. ii. p. 417, n. 10 (1845); id. Cat. B. New Guin. pp. 39, 59 (1859).

Cat. Coll. B. p. 73 (1889).

Chalcopsitta scintillata, Bp. Consp. Av. i. p. 3 (1849); id. Rev. et Mag. de Zool. 1854, p. 156, n. 291; id. Naumannia, 1856, Consp. Psitt. sp. 305; G. R. Gr. P.Z. S. 1858, p. 194, 1861, p. 436; Rosenb. Journ. f. Orn. 1862, pp. 64, 65; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 144, 145, 225 (1863); id. Journ. f. Orn. 1864, p. 113, sp. 11; Wall. P. Z. S. 1864, p. 289; G. R. Gr. Hand-list, ii. p. 153, sp. 8192 (1870); Sclat. P. Z. S. 1872, p. 862; Garrod, P. Z. S. 1876, p. 692; Sclat. List Vert. An. 8th ed. p. 319 (1883); Tristr. Cat. Call. R. p. 73 (1889)

Chalcopsitta scintillans, Bp. P. Z. S. 1850, p. 26; Sclat. Journ. Pr.

Linn. Soc. ii. p. 165, sp. 111 (1858); id. P. Z. S. 1860, p. 227. Chalcopsitta rubrifrons, G. R. Gr. P. Z. S. 1858, pp. 182, 194, pl. 135 (3 fig. opt.); Sclat. Ibis, 1859, p. 102 (note); G. R. Gr. P. Z. S. 1861, p. 436.

Eos scintillatus, G. R. Gr. List Psitt. Brit. Mus. p. 53 (1859). Eos rubrifrons, G. R. Gr. List Psitt. Brit. Mus. p. 53 (1859); id. Cat. B. New Guin. pp. 39, 59 (1859); Rosenb. Journ. f. Orn. 1864,

p. 114, sp. 15; id. Reis nuar Zuidoostereil. p. 48 (1867).

Domicella scintillata, Finsch, Papag. ii. p. 752 (1868); Meyer, Sitzb. k. Ak. Wissensch. Wien, lxx. p. 238 (1874): id. Sitzb. Isis Dresd. 1875, p. 78; id. Ibis, 1875, p. 147; Sharpe, Journ. Pr. Linn. Soc., Zool. xiii. p. 80 (1878); Rehnw. Journ. f. Orn. 1881, p. 166 (syn. emend.) (Consp. Psitt. p. 102); id. Vogelbild. t. xxxi. f. 2 (1878-83).

Chalcopsittaeus scintillatus, Salvad. Ann. Mus. Civ. Gen. x. p. 34, n. 75 (1877); id. P. Z. S. 1878, p. 93; D'Alb. et Salvad. Ann. Mus. Civ. Gen. xiv. p. 37 (1879); Salvad. Orn. Pap. e Mol. i. p. 274 (partim) (1880); id. Voy. Chall., Birds, p. 75 (1881); Sharpe, Gould's B. New Guin. pt. xiv. pl. 2 (1883); Meyer, Zeitschr. f. ges. Orn. i. p. 274 (1884); Guillem. P. Z. S. 1885, p. 622 (Aru Isl.); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 171 (1889).

Adult. Green, hind neck, upper back, breast, and abdomen streaked down the shafts with yellow; sinciput, lores, and upper cheeks red; vertex, occiput, sides of the head and chin black; throat and sides of the breast stained with red; lower back and rump bright green, with a blue tinge; breast dark green, with orange-yellow shaftstreaks; tibiæ and under wing-coverts red; under tail-coverts green; quills underneath dusky, with a well-defined yellow area towards the base; tail-feathers green above, red for the basal half of the inner web; the apical part of the tail-feathers underneath yellowish olive: bill, eere, and feet black; iris orange-yellow. Total length 11.8 inches, wing 7.2, tail 4.5, bili 0.9, tarsus 0.85.

Young. The head is entirely dark chestnut, with no red on the

forehead.

Hab. Western New Guinea, meeting with C. chloropterus along the Fly River; Aru Islands.

 $a, b, \beta \supseteq ad. sk.$ Aru Islands. Wallace Coll. (Types of Chalcopsitta rubrifrons, G. R. Gr.) Aru Islands. Wallace Coll. c. 3 ad. sk. d. Ad. sk. Aru Islands (A. R. Wallace). Purchased. e. Ad. sk. Aru Islands. Gould Coll. f, g. of ad. sk. h, i. Ad. sk. 'Challenger' Exped. Wokan, Aru Islands. Aru Islands. Tweeddale Coll. New Guinea. k. Ad. sk. Wallace Coll. New Guinea. l. ♀ ad. sk. Tweeddale Coll. Doktur, N.W. New Guinea. Purchased. m. Ad. sk.

# 7. Chalcopsittacus chloropterus.

Chalcopsittacus chloropterus, Salvad. Ann. Mus. Civ. Gen. ix. p. 15 (1876) (Hall Bay), x. p. 34, n. 76 (1877); D'Alb. Sydn. Mail, 1877, p. 248; id. Ann. Mus. Civ. Gen. x. p. 8 (1877); Salvad. ibid. (note) VOL. XX.

(1877); D'Alb. Ibis, 1877, p. 366; Ramsay, Pr. Linn. Soc. N.S. W. iii. p. 106 (1878), iv. p. 96 (Port Moresby) (1879); Finsch u. Mcyer, Zeitschr. f. ges. Orn. 1886, p. 8; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 171 (1889).

Eos scintillata, D'Alb. (nec Temm.), Sydn. Mail, 1877, p. 248; id.

Ann. Mus. Civ. Gen. x. p. 8 (1877).

Chalcopsittacus scintillatus, d'Alb. (nec Temm.), Ann. Mus. Civ. Gen. x. p. 19 (1877); Sharpe, Journ. Pr. Linn. Soc., Zool. xiv. p. 686 (1879); Salvad. Orn. Pap. e Mol. i. p. 274 (partim) (1880), iii. p. 519 (1882).

Chalcopsittacus scintillans, Ramsay, Pr. Linn. Soc. N. S. W. iii.

p. 106 (1878) (Hall Sound, Katau).

Chalcopsitta chloropterus, Ramsay, Pr. Linn. Soc. N. S. W. iii. p. 254

(1878-79).

Domicella scintillata, part., Rchnw. Journ. f. Orn. 1881, p. 166 (Consp. Psitt. p. 102).

Adult. Very similar to C. scintillatus, from which it differs in the under wing-coverts being ordinarily green mingled with red, sometimes entirely green; besides, the hind-neck feathers are generally more green, and the yellow area on the quills beneath is not so well defined.

Hab. S.E. New Guinea and the Fly-River region.

Along the Fly River the two forms C. scintillatus and C. chloropterus meet.

a. Ad. sk.	Port Moresby.	K. Broadbent [C.].
b. Ad. sk.	Port Moresby.	Rev. S. Macfarlane [C.].
c. Ad. sk.	Port Moresby.	Gould Coll.
d-q. Ad. sk.	S.E. New Guinea (A. Goldie).	Purchased.

#### 2. EOS.

Type. Eos, Wagl. Mon. Psitt. p. 494 (1832) . . . . . . . . . E. histrio.

Range. Moluccas, Sanghir Islands, Papuan Islands, Tenimber Islands, Solomon Islands and Puynipet of the Caroline Islands.

# Key to the Species.

I. Red; uropygium also red. a. Tail above black; middle tail-feathers entirely black, the lateral ones with the inner web red. a'. Upper wing-coverts black; interscapular region red..... ..... cyanogenys, p. 19. b'. Upper wing-coverts red; hind neck and interscapular region with blue shaft-streaks ... reticulata, p. 20. b. Tail above dark purple; the lateral tail-feathers with the inner web red; interscapular region and nape blue. c'. Larger; the upper part of the breast entirely blue; wing 6.6 inches, tail 5.3 ......... histrio, p. 21.

d'. Smaller; the upper part of the breast red, mixed with blue; wing 6 inches, tail 4 ... challengeri, p. 22. 2. Eos. 19

c. Tail above dull red. e'. No violet collar. a''. Almost entirely red; only the wingcoverts along the edge of the wing edged with bluish purple ..... cardinalis, p. 22. b". Red; the scapulars mostly blue.  $a^{\prime\prime\prime}$ . Whole of the face red .... rubra, p. 23. b". A blue band through the subocular region ..... semilarvata, p. 25. f'. A purple collar round the neck. c''. Head red; no red spot on the occiput in the adult bird ..... wallacei, p. 26. d". Head red; a purple spot on the occiput. insularis, p. 27. e". Hind neck and occiput purple like the collar riciniata, p. 28. d. Tail above olive, yellowish towards the tip; red colour all over the body, except tail and rubiginosa, p. 29. whitish grey, more or less tinged with sulphuryellow ..... fuscata, p. 30.

## I. Eos cyanogenys.

Eos cyanogenia, Bp. Consp. i. p. 4 (1850); id. Compt. Rend. xxx.
p. 135 (1850); id. P. Z. S. 1850, p. 27, pl. xiv.; id. Rev. et May. de Zool. 1854, p. 156, sp. 287; id. Naumannia, 1856, Consp. Psitt. sp. 301; Sclat. Ibis, 1859, p. 211; G. R. Gr. List Psitt. Brit. Mns. p. 51 (1859); id. P. Z. S. 1859, p. 158; Sclat. P. Z. S. 1860, p. 227; G. R. Gr. P. Z. S. 1860, p. 357; Rosenb. Journ. f. Orn. 1862, p. 65; id. Journ. f. Orn. 1864, pp. 114, n. 13; Wall. P. Z. S. 1864, pp. 290, 295; Schleg. Dierent. p. 68 (1864); Wall. Ibis, 1865, p. 395; G. R. Gr. Hand-list, ii, p. 154, sp. 8200 (1870).

1864, pp. 290, 295; Schleg. Dierent. p. 68 (1864); Wall. Ibis, 1865, p. 395; G. R. Gr. Hand-list, ii. p. 154, sp. 8200 (1870).

Lorius evanogenia, Schleg. Mus. P.-B. Psittaci, p. 128 (1864); id. Mus. P.-B. Psittaci, Revue, p. 58 (1874); Gieb. Thes. Orn. ii. p. 500 (1875); Rosenb. Reist. nuar Geelvinkb. pp. 36, 47 (1875).

Lorius cyanogenius, Finsch, Neu-Guin. p. 157 (1865).

Domicella cyanogenys, Finsch, Papag. ii. p. 796 (1868); Meyer, Sitzb. k. Åk. Wiss, Wien, lxx. pp. 234, 235 (1874); id. Ibis, 1875, p. 147; id. Sitzb. Isis Dresd. 1875, p. 78; Rehnw. Journ. f. Orn. 1881, p. 167 (Consp. Psitt. p. 103); id. Vogelbild. t. xxxi. f. 6 (1878-83).

Eos cyanogenys, Salvad. Ann. Mus. Civ. Gen. x. p. 33, n. 65 (1877);
id. P. Z. S. 1878, p. 86; id. Orn. Pap. e Mol. i. p. 246 (1880); id.
Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 168 (1889); Meyer, Vogel-Skelett. t. xlvi. (1879-89).

Adult. Red, with a purple gloss; ear-coverts and feathers round the eyes purple-blue; upper wing-coverts, scapulars, outer web and tip of the quills, two middle tail-feathers, and outer web of the lateral ones black; a black spot on the flanks above the thighs; the primaries have the inner web, near the black tip, yellow; inner web of the lateral tail-feathers red; bill orange-red; feet black; iris red. Total length 11.5 inches, wing 6.3, tail 4.2, bill 0.85, tarsus 0.7.

20 LORIIDÆ.

Young. Crown, neck, lower back, and underparts red with purpleblack irregular cross lines.

Hab. Mafor Island, Pulo Manin, and Mysore Island in Geelvink

Bay.

No locality. Zoological Society. *a*. Ad. st. b. ♀ ad. st.
 c. Ad. sk. Zoological Society. No locality. Mafor Island. Gould Coll. [Wrongly labelled] New Guinea. Tweeddale Coll. d. Ad. sk. Mafor Island. Wallace Coll. e. ♀ juv. sk.

#### 2. Eos reticulata.

Blue-necked Lory, Lath. Gen. Hist. ii. p. 136 (1822).

Lorius borneus (!), Less. (nec Steph.) Tr. d'Orn. p. 192 (1831); id. Compl. de Buff., Ois. 2nd ed. p. 606 (1838); Salvad. Cat. Ucc. di Borneo, p 27 (note) (1874).

Psittacus reticulatus, S. Müll. Verh. Land- en Volkenk. pp. 107, 108 (1839–1844) (type examined); Wiegm. Arch. f. Naturg. 1842, ii.

p. 29; G. R. Gr. Gen. B. ii. p. 421, n. 24 (1846).

Eos cyanostriata, G. R. Gr. Gen. B. ii. p. 421, n. 24 (1640).

Eos cyanostriata, G. R. Gr. Gen. B. ii. p. 417, n. 9, pl. 103 (1845);

Elyth, Cat. B. Mus. A. S. B. p. 11 (1849); Ep. P. Z. S. 1850,

p. 29; Hartl. Journ. f. Orn. 1854, p. 1xiii; Ep. Rev. et Mag. de

Zool. 1854, p. 156, n. 288; id. Naumannia, 1856, Consp. Psitt,

p. 303; Selat. P. Z. S. 1860, p. 226; Wall. Ibis, 1861, p. 311; id. P. Z. S. 1864, pp. 290, 295.

Eos bornea, Souancé, Rev. et Mag. de Zool. 1856, p. 226; G. R. Gr.

Mus. Civ. Gen. x. p. 33, n. 65 (1877); id. Orn. Pap. e Mol. i. p. 245 (1880); Tristr. Cat. Coll. B. p. 73 (1889); Meyer, Verh. z.-b. Gesellsch. Wien, 1881, p. 771 (Babbar); Sharpe, Gould's B. New Guin. pt. xv. pl. 2 (1883); Sclat. P. Z. S. 1883, pp. 51, 58, 194, 200; id. List Vert. An. 8th ed. p. 318 (1883); Meyer, Sitzb. v. Abh. Gesellsch. Isis, 1884, Abh. i. p. 15; Forbes, P. Z. S. 1884, p. 421; Meyer, Zeitschr. f. ges. Orn. i. p. 196 (1884); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 168 (1889). Eos sp. (ex Ins. Tenimber), Rosenb. Journ. f. Orn. 1862, p. 65.

Psittacus (Eos) guttatus, Rosenb. Nat. Tijdschr. Ned. Ind. xxv. p. 145

(1863).

Lorius reticulatus, Schleg. Mus. P.-B. Psittaci, p. 128 (1862); Finsch, Neu-Guin. p. 157 (1865); Schleg. Mus. P.-B. Psittaci, Revue, p. 58 (1874); Gieb. Thes. Orn. ii. p. 501 (1875); Büttik. Notes Leyd. *Mus.* viii. p. 62 (1886).

Domicella reticulata, Finsch, Papag. ii. p. 797 (1868); Rehnw. Journ. f. Orn. 1881, p. 168 (Consp. Psitt. p. 104); id. Vogelbild., Nachtr.

40 (1883).

Eos reticulatus, G. R. Gr. Hand-list, ii. p. 154, sp. 8203 (1870).

Adult. Red; underparts mottled with darker red; ear-coverts blue; hind neck and interscapular region with bright blue shaftstreaks; uropygium and upper tail-coverts with dull purple shaftstreaks; smaller and median wing-coverts red with the hidden base

21 2. Eos.

black; greater wing-coverts black, with the tips red; primaries black, with the base of the inner web red: secondaries red, with the tip black; scapulars black, outwardly edged with red; tail above black, with a slight tinge of purple; inner web of the lateral tailfeathers red; tail underneath red; the outer web of the lateral tailfeathers golden-olive: "bill scarlet with the tip orange; cere, naked skin round the eyes, and feet black; iris rich brown" (Forbes). Total length 11.5 inches, wing 6.3, tail 5.2, bill 0.8, tarsus 0.7.

Hab. Tenimber Islands.

a, b. Ad. st.	Timor-laut.	Capt. W. Chambers [P.].
	(Types o	f Eos cyanostriata, Gray.)
c. Ad. st.	Timor-laut?	Zoological Society.
d. Ad. sk.	Tenimber Isl.	Wallace Coll.
e. Ad. sk.	Timor-laut.	Wallace Coll.
f. d ad. sk.	Larat, Timor-laut.	H. O. Forbes [C.].
g. ♂ ad. sk.	Larat, Timor-laut (H. O.	Tweeddale Coll.
•	Forbes).	
$h. \ Q \ ad. \ sk.$	Maroe, Tenimber Isl.	H. O. Forbes [C.].
<i>i</i> . ♀ ad. sk.	Maroe, Tenimber Isl. (H.	Tweeddale Coll.
	O. Forbes).	

#### 3. Eos histrio.

Psittaca indica coccinea, Briss. Orn. iv. p. 376, pl. xxv. f. 2 (1760). Perruche des Indes Orientales, D'Aubent. Pl. Enl. 143 (17-?). Psittacus histrio, Müll. S. N. Suppl. p. 76 (1776); Cass. Pr. Ac.

Philad. 1864, p. 239.

Lori Perruche violet et rouge, Buff. Hist. Nat. Ois. vi. p. 138 (1779); Levaill. Perr. pl. 53 (1801–1805).

Indian Lori, Lath. Syn. i. p. 217, n. 19 (1781); id. Gen. Hist. ii.

p. 128 (1822). Psittaeus indicus, Gm. S. N. i. p. 318, n. 58 (1788); Bechst. Kurze

Ueb. p. 69 (1811); Vieill. Enc. Méth. iii. p. 1383 (1823).
Psittacus coccineus, Lath. Ind. Orn. i. p. 89, n. 22 (1790); Shaw,
Nat. Misc. pl. 737 (1789–1813); Bechst. Kurze Ueb. p. 69 (1811); Shaw, Gen. Zool. viii. 2, p. 461, pl. 68 (1811); Kuhl, Consp. Psitt. p. 42 (1820); Müll. et Schleg, Verh. Land- en Volkenk. p. 182 (1839-1844); Russ, Papag. p. 760 (1881). Indian Loti, var. A, Lath. Gen. Hist. ii. p. 128 (1822).

Lorius coccineus, Steph. Gen. Zool. xiv. 2, p. 132 (1826); Schleg. Mus. P.-B. Psittaci, p. 128 (1864); id. Ned. Tijdschr. Dierk. iii. p. 186 (1865); G. R. Gr. Hand-list, ii. p. 153, no. 8190 (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 58 (1872); Gieb. Thes. Orn. ii. p. 500 (1875); Gulliv. P. Z. S. 1875, p. 489; Rosenb. Zool. Gart. 1878, p. 346

1878, p. 346.

Eos indica, Wagl. Mon. Psitt. p. 557 (1832); G. R. Gr. Gen. B. ii. p. 417, no. 1 (1845); Bp. P. Z. S. 1856, p. 28; id. Rev. et Mag. de Zool. 1854. p. 156, no. 286; Souancé, Rev. et Mag. de Zool. 1856, p. 226; Bp. Naumannia, 1856, Consp. Psitt. no. 297; G. R. Gr. List Psitt. Brit. Mus. p. 51 (1859); id. P. Z. S. 1860, p. 357; Wall. P. Z. S. 1864, pp. 290, 295; Garrod, P. Z. S. 1873, pp. 465, 634, 1874, p. 587; Sclat. List Vert. An. 8th ed. p. 318; Hickson,

Natural. in N. Celebes, p. 155 (1889) (Ibis, 1890, p. 249). Eos coccinea, Sclat. P. Z. S. 1860, p. 227; Rosenb. Joven. f. Orn. 1862, p. 63; id. Nat. Tijdschv. Ned. Ind. xxv. p. 142 (1863); Salvad.

Orn. Pap. e Mol. i. p. 268 (1880).

Lorius indicus, Finsch, Neu-Guin. p. 157 (1865).

Domicella coccinea, Finsch, Papag. ii. p. 800 (1868); Rowl. & Meyer, Orn. Misc. iii. p. 123, pl. 98 (1878); Meyer, Ibis, 1879, p. 55; Platen, Gefied. Welt, 1887, p. 263.

Eos histrio, G. R. Gr. Hand-list, ii. p. 154, n. 8199 (1870); Meyer, Sitzb. u. Abh. Gesell. Isis, 1884, Abh. i. p. 6; Blas. Ornis, iv. p. 563

(1888).Lorius histrio, Koch, Verz. Samml. Vogelb. ans Celeb. u. Sanghir, p. 1 (Febr. 1876); Brüggem. Abh. naturw. Ver. Brem. v. pp. 41, 100 (1876); Fischer, ibid. p. 538 (1878).

Domicella histrio, Rehnw. Journ. f. Orn. 1881, p. 167 (Consp. Psitt. p. 103); id. Vogelbild. t. xxxi. f. 1 (1883).

Adult. Red; vertex, ear-coverts, nape, interscapular region, and breast blue; flanks and vent purple-blue; under tail-coverts red, with purple-blue tips; scapulars and tips of the upper wing-coverts and of the quills black; base of the inner web of the quills red; tail above dull purple, with the inner web of the lateral feathers red: bill orange-red; feet blackish. Total length 12.6 inches, wing 6.6, tail 5.3, bill 0.9, tarsus 0.75.

Hab. Saughir and Talaut Islands.

a. Ad. st. Zoological Society. b. ♀ ad. st. Purchased. c. Ad. sk.; d. ♀ Wallace Coll. Sanghir Isl. ad. sk. e. ♀ ad. sk. f. ♀ ad. sk. Sanghir Isl. Gould Coll. Tweeddale Coll. Siao, Sangi Isl. (Dr. A. B. Meyer). Saha Isl. J. Hickson, Esq. [C.]. y. ♂ ad. sk.

## 4. Eos challengeri.

Eos indica, Sclat. (nec Gm.) P. Z. S. 1878, p. 578; id. Voy. Chall., Birds, p. 115 (1881); Murray, Voy. Chall., Narr. i. 2, p. 669 (1885); ? Hickson, Natural. in N. Celebes, p. 155 (1889).

Very much like E. histrio, but much smaller, and with the blue colour on the breast less extended and more or less mingled with red: "bill orange; feet black; eyes red, or light brown in the male" Total length 9.8 inches, wing 6, tail 4, bill 0.8, (Murray). tarsus 0.68.

Hab. Meangis or Nanusa Islands, north-east of the Talaut Islands.

a.  $\beta$  ad.; b, c. Q Meangis Isl., 10th February. 'Challenger' Exped. ad. sk. (Types of species.)

#### 5. Eos cardinalis.

Lori cardinal, Hombr. et Jacq. Voy. Pôle Sud, Atlas, pl. 24 bis. f. 2 (1845).

Lorius cardinalis, G. R. Gr. Gen. B., App. p. 20 (1849); Jacq. et Pucher. Voy. Pôle Sud, Zool, iii. p. 103 (1853); Hartl, Journ. f. Oru. 1854, p. 165; Sclat. P. Z. S. 1873, p. 3; Gieb. Thes. Orn. ii. p. 500 (1875); Ramsay, Pr. Linn. Soc. N. S. W. iv. p. 68 (1879); id. Nature, xx. p. 125 (1879); Tristr. Ibis, 1882, pp. 138, 143.

Eos cardinalis, Bp. Compt. Rend. xliv. p. 539 (1857); G. R. Gr. List Psitt. Brit. Mus. p. 53 (1859); id. Cat. B. Trop. Isl. p. 31 (1859); Sclat. P. Z. S. 1860, p. 228, 1869, pp. 122, 124; G. R. Gr. Hand-list, ii. p. 154, sp. 8205 (1870); Layard, Ibis, 1880, p. 307; Salvad, Orn, Pap. e Mol. i. p. 249 (1880), iii. p. 518 (1882); Ramsay, Pr. Linn. Soc. N. S. W. vii. p. 34 (1882); Grant, P. Z. S. 1887, p. 330, 1888, p. 190; Woodford, P. Z. S. 1888, p. 249; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 168 (1889); Tristr. Cat. Coll. B. p. 73 (1889).

Eos unicolor, Wall. (nec Shaw), P. Z. S. 1864, pp. 291, 295.

Domicella cardinalis, Finsch, Papag. ii. p. 185 (1868); id. P. Z. S. 1869, p. 128, pl. xi.; Ramsay, Pr. Linn. Soc. N.S. W. i. p. 67 (1876); Rehnw. Vogelbild. t. xxxiii. f. 4 (1878-83).

Trichoglossus cardinalis, Rehnw. Journ. f. Orn. 1881, p. 162 (Consp.

Psitt. p. 98).

Domicella (Eos) cardinalis, Rchnw. Journ. f. Orn. 1882, p. 232.

Adult. Red, rump and upper tail-coverts darker; back and wings dull red; feathers of the breast and abdomen edged with whitish; bend of the wing and metacarpal edge have the feathers edged with dull purplish blue; quills and tail-feathers brown-red, with an olive tinge; bill dusky orange; feet blackish; iris reddish brown. Total length about 13 inches, wing 7.3, tail 6.3, bill 0.95, tarsus 0.70.

Female. Like the male, only smaller. Total length 12 inches,

wing 6.9, tail 5.9, bill 0.85, tarsus 0.69.

Hab. Solomon Islands.

J. Brenchley, Esq. Guadalcanar, Sept. 1865.  $a. \ \beta \ \text{ad.}; b. \ Q \ \text{ad.};$ c. Ad. sk. [P.]. d. Ad. sk. Tweeddale Coll. Solomon Islands. e. ♀ ad. sk. Guadalcanar, Sept. 1880 (G. Tweeddale Coll. E. Richards).

f. Ad. sk. [Duke of York Islands \*.]

P. L. Sclater, Esq. [P.].

#### 6. Eos rubra.

Long-tailed scarlet Lory, Edw. Birds, iv. pl. 173 (1751); Lath. Syn. i. p. 216, no. 18 (1781); id. Gen. Hist. ii. p. 127 (1822). Psittaca coccinea Bonarum fortunarum insulæ, Briss. Orn. iv. p. 273 (1760).

Psittacus borneus, Linn. S. N. i. p. 141, no. 11 (1766); Gm. S. N. i. p. 318 (1788); Lath. Ind. Orn. i. p. 89, no. 21 (1790); Bechst. Kurze Uebers. p. 69 (1811); Shaw, Gen. Zool. viii. p. 460, pl. 67 (1811); Kuhl, Consp. Psitt. p. 40 (1820); Vieill. Enc. Méth. p. 1382 (1823); Wall. P. Z. S. 1863, p. 21; Finsch, Papag. ii. p. 911 (1868); Salvad. Cat. Ucc. Born. p. 27 (note) (1874). Lory de la Chine, D'Aubent. Pl. Enl. 519.

Lori de Gilolo (!), Sonn. Voy. Nouv. Guin. p. 177, pl. 112 (1776). Psittacus chinensis (!), Müll. S. N. Suppl. p. 77 (1776); Cass. Pr. Ac. Nat. Sc. Philad. 1864, p. 240.

Lory rouge, Buff. Hist. Nat. Ois. vi. p. 134 (1779).

<sup>\*</sup> Specimen f is the one mentioned by Mr. Selater (P. Z. S. 1873, p. 3), who received it from Dr. Bennett as from the Duke of York Islands; but I feel pretty sure that the locality given is erroneous.

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Molucca Lory, Lath. Syn. i. p. 274 (1781); id. Gen. Hist. ii. p. 122

(1822).

Psittacus ruber, Gm. S. N. i. p. 335, no. 101 (1788); Lath. Ind. Orn. i. p. 115, no. 100 (1790); Bechst. Kurze Uebers. p. 92 (1811); Kuhl, Consp. Psitt. p. 38 (1820); Vieill. Enc. Méth. p. 1380, pl. 227. f. 4 (1823); Less. Voy. Coq., Zool. i. p. 627 (1828); Hahn, Orn. Atl., Papag. t. 49 (1836); Temm. Tabl. Méth. p. 60 (1839); S. Müll. Verh. Land- en Volkenk. pp. 107, 119 (1839-44).

Psittacus moluccensis, Lath. Ind. Orn. i. p. 116, no. 101 (1790); Bechst, Kurze Uebers, p. 93 (1811); Vieill, Enc. Méth. p. 1379

(1823).

Perruche écarlate, Levaill. Perr. pl. 44 (1801).

Lori à franges bleues, Levaill. Perr. pl. 93 (1805).

Perrequet Lori à queue bleue, Levaill. Perr. pl. 97 (1805) (artificial bird).

Psittacus cæruleatus, Shaw, Nat. Misc. pl. 937 (1789-1813); id. Gen. Zool. viii. p. 539 (1811); Bechst. Kurze Uebers, p. 93, pl. 16 (1811); Vieill. N. D. xxv. p. 336 (1817); id. Enc. Méth. p. 1379 (1823).

Psittacus eyanurus, Shaw, Gen. Zool. viii. p. 538 (ex Levaill, pl. 97) (1811); Kuhl, Consp. Psitt. p. 41 (1820); Brehm, Mon. Papag.

t. 68 (1855).

Psittacus evauonotus, Vieill. N. D. xxv. p. 334 (ex Levaill. pl. 93) (1817); id. Enc. Méth. p. 1378 (1823).
Blue-fringed Lory, Lath. Gen. Hist. ii. p. 227 (1822).

Blue-tailed Lory, Lath. ibid.

Red Lory, Lath. op. cit. p. 229 (1822).

Lorius ruber, Steph. Gen. Zool. xiv. 1, p. 132 (1826); Less. Tr. d'Orn.
p. 192 (1831); Schleg. Mus. P.-B. Psittaci, p. 123 (1864); Finsch, Neu-Guin. p. 157 (1865); Schleg. Ned. Tijdschr. Dierk. iii. pp. 332, 334 (1866); id. Mus. P.-B. Psittaci, Revue, p. 56 (1874); Gieb. Thes. Orn. ii. p. 502 (1875).

Lorius borneus, Steph. Gen. Zool. xiv. 1, p. 132 (1826).

Lorius cyanurus, Steph. ibid.; Wall. P. Z. S. 1864, p. 289 (note). Eos rubra, Wagl. Mon. Psitt. p. 558 (1832); G. R. Gr. Gen. B. ii. p. 417, no. 2 (1845); Bp. P.Z. S. 1850, p. 23; id. Rev. et Mag. de Zool. 1854, p. 156, no. 280; id. Naumannia, 1856, Consp. Psitt. sp. 298; Souancé, Rev. et Mag. de Zool. 1856, p. 226; Horsf. & Moore, Cat. B. Mus. E. Ind. Co. ii. p. 629 (1856); Wall. Ann. & Mag. N. H. (3) iii. p. 147 (1859); G. R. Gr. List Psitt, Brit. Mus. p. 51 (1859); Sclut. P. Z. S. 1860, p. 226; G. R. Gr. P. Z. S. 1800, p. 356; Wall. Ibis, 1861, p. 284; Rosenb. Journ f. Orn. 1862, pp. 61, 66; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 140, 141 (1863); Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xviii (1863); Wall. P. Z. S. 1864, pp. 290, 295; Pelz. Novara Reis., Vög. p. 98 (1865); G. R. Gr. Hand-list, ii. p. 154, no. 8201 (1870); Salvad. Ann. Mus. Civ. Gen. x. p. 33, no. 69 (1877); id. P. Z. S. 1878, p. 86; Forbes, P. Z. S. 1879, pp. 170, 173, pl. xvi. fl. 7, 9 (8kull and lower mandible). Salvad. Over Page 4 (1876); id. lower mandible); Salvad. Orn. Tap. e Mol. i. p. 251 (1880); id. Voy. Chall., Birds, p. 68 (1881); Blas. u. Nehrk. Verh. z.-b. Gesellsch. Wien, 1882, p. 416; Blas. P. Z. S. 1882, p. 701; Sclat. List Vert. An. 8th ed. p. 319 (1883); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 168 (1889); Tristr. Cat. Coll. B. p. 73 (1889).

Psittacus guebuensis, part., S. Müll. Verh. Land- en Volkenk. p. 107

(1839-1844).

Lorius cæruleatus, G. R. Gr. Gen. B. ii. p. 416, no. 4 (1845); id. List Psitt. Brit. Mus. p. 50 (1859); Wall. P. Z. S. 1864, p. 289 (note)

252. Eos.

Eos squamata, Sclat. P. Z. S. 1860, p. 226 (Ceram); G. R. Gr. P. Z. S. 1860, p. 357 (Bourou).
 Eos sp. (ev Ins. Kei), Rosenb. Journ. f. Orn. 1862, p. 05.

Eos rubra, var., Wall. P. Z. S. 1863, p. 21.

Psittacus (Eos) bernsteinii, Rosenb. Nat. Tijdschr. Ned. Ind. xxv. p. 145 (1863).

Lorius squamatus, Schleg. (nec Bodd.), Mus. P.-B. Psittaci, p. 124, nos. 1, 2 (types examined) (1864); Finsch, Neu-Guin. p. 157 (1865); Rosenb, Reis naar de Zuidoostereil, p. 80 (1867).

Domicella rubra, Finsch, Papag. ii. p. 786 (1868); Lenz, Journ. f. Orn. 1877, p. 364; Rehnw. Journ. f. Orn. 1881, p. 169 (Consp. Psitt. p. 105); id. Vogelbild. t. xxxi. f. 4 (1878–83).

Domicella schlegelii, Finsch, Papag. ii. p. 792 (1868) (types

examined).

q. Var. sk.

Adult. Red; under tail-coverts and longest scapulars blue; a band from the thighs to the under tail-coverts also blue; wings red; the three or four first primaries black, with the base of the inner web red; the other quills red, with black tips; the innermost quills black, tinged with blue towards the tips; tail above dull red, underneath golden red, with the base of the inner web of the tail-feathers bright red; bill red; feet dusky black. Total length 12.5 inches, wing 6.5, tail 4.4, bill 0.95, tarsus 0.8.

Young. The feathers of the underparts are more or less edged

with blue; under tail-coverts red tinged with purple.

Hab. The Southern Moluccas—Bouru, Ceram, Amboyna, Harouko, Ceram-Laut, Goram, Monawolka, Matabello, Tejor, Khoor, Banda, and Ké Islands.

No locality. a. Ad. st. Laugier Coll. Ad. sk. Ceram. Wallace Coll. c. ♂ ad. sk. Amboyna (A. R. Wallace). Gould Coll. *d*, *e*. Ad. sk. Amboyna. Wallace Coll. f, g. ♂♀ ad. sk. h. Ad. sk. Amboyna, May. H. O. Forbes [C.]. Goram. Wallace Coll. i. Ad. sk. Goram (A. R. Wallace). Tweeddale Coll. k. Ad. sk. Goram (A. R. Wallace). Salvin-Godman Coll.  $l, m, n, \beta \neq ad.sk.$ 'Challenger' Exped. Ké Dulan. o. Ad.; p. Juv. No reliable locality. Tweeddale Coll. sk.

[Kept alive in confinement.]

#### 7. Eos semilarvata.

Eos semilarvata, Bp. Consp. i. p. 4 (1850) (type examined); id. os seminarvata, Bp. Consp. 1, p. 4 (1850) (type exammed); id. Compt. Rend. xxx. p. 135 (1850); id. P. Z. S. 1850, p. 27, pl. xv.; id. Rev. et Mag. de Zool. 1854, p. 156, sp. 283; id. Naumannia, 1856, Consp. Psitt. sp. 302; G. R. Gr. List Psitt. Brit. Mus. p. 51 (1859); id. P. Z. S. 1860, p. 357; Rosenb. Journ. f. Orn. 1862, p. 65; id. Nat. Tijdschr. Ned. Ind. xxv. p. 144 (1863); id. Journ. f. Orn. 1864, p. 114, sp. 14; Wall. P. Z. S. 1864, pp. 290, 295; Schleg. Dierent. p. 68, with figure (1864); G. R. Gr. Hand-list, ii. p. 155, sp. 8208 (1870); Salvad. Ann. Mus. Civ. Gen. x. p. 33, n. 68 (1877); id. Orn. Pap. e. Mol. i. p. 250 (1880); id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 168 (1889).

Lorius semilarvatus, Schleg. Mus. P.-B. Psittaci, p. 124 (1864); Finsch, Neu-Guin. p. 157 (1865); Schleg. Mus. P.-B. Psittaci, Revue, p. 57 (1874); Gieb. Thes. Orn. ii. p. 502 (1875); Rosenb. Reist, naar Geelvinkb. p. 47 (1875).

Domicella semilarvata, Finsch, Papag. ii. p. 794 (1868); Rehnw. Journ. f. Orn. 1881, p. 168 (Consp. Psitt. p. 104); id. Vogelbild.,

Nachtr. 41 (1883).

Adult. Red; band on the cheeks from the base of the lower mandible to the ear-coverts blue; vent and a spot on the longest scapulars also blue; wings red; primaries and their coverts black, on the inner web red; secondaries red, with the tips black, under wing-coverts red; tail above dull red, the inner web of the tailfeathers red; tail underneath red, dusky towards the tip; bill orange-red?; feet black. Total length 8.92 inches, wing 5.18, tail 3.94, bill 0.82, tarsus 0.59. (Leyden Museum.)

Young. The blue on the cheeks less extended; the feathers of the abdomen with narrow blue edges; a spot on the abdomen and the under tail-coverts blue; primary-coverts dusky, edged with blue

outwardly. (Darmstadt Museum.)

Hab. Unknown.

#### 8. Eos wallacei.

Lory de Gueby, D'Aubent. Pl. Enl. 684 (jun.) (probable type examined).

Lorv rouge et violet, Buff. Hist. Nat. Ois. vi. p. 125 (jun.) (1779). Psittacus squamatus, Bodd. Tabl. Pl. Enl. p. 42 (ex Pl. Enl. 684)

(1783).

Psittacus guebiensis, part., Gm. S. N. i. p. 318, n. 60 (1788); Lath. Ind. Orn. i. p. 90, n. 24 (partim) (1790); ? Less. Voy. Coq., Zool. i. p. 628 (1828); Temm. Tabl. Méth. p. 60 (1839); Brehm, Mon. Papag. t. 69 (ex Levaill.) (1855).

Lory écaillé, Levaill. Perr. pl. 51 (1801).

Psittacus squameus, Shaw, Gen. Zool. vii. p. 463 (ex Pl. Enl. 684) (1811).

Gueby Lory, Lath. Gen. Hist. ii. p. 134 (excl. var. A et B) (1822). Psittacus guebuensis, part., Vieill. Enc. Méth. p. 1380 (1823).

Lorius guebiensis, Steph. Gen. Zool. xiv. p. 132 (1826); Less. Tr.

d'Orn. p. 193 (1831).

Eos guebiensis, Wagl. Mon. Psitt. p. 559 (1832) (type examined); Bp. P. Z. S. 1850, p. 28; id. Rev. et Mag. de Zool. 1854, p. 156, n. 284; id. Naumannia, 1856, Consp. Psitt. sp. 299; Schleg.

Dierent. p. 68 (1864).

Eos squamata, G. R. Gr. Gen. B. ii. p. 417, n. 3 (1845); Sclat. Journ. Pr. Linn. Soc. ii. p. 165, n. 109 (1858); G. R. Gr. P. Z. S. 1858, p. 194; id. Cat. B. New Guin. pp. 39, 59 (1859); id. List Psitt. Brit. Mus. p. 51 (1859); id. P. Z. S. 1861, p. 436; Wall. Ibis, 1861, p. 311; id. P. Z. S. 1864, pp. 290, 295; G. R. Gr. Hand-list, ii. p. 155, sp. 8207 (1870) (excl. syn. et patria).

Eos cochinsinensis, var., G. R. Gr. P. Z. S. 1861, pp. 431, 436;

Bernst. Nat. Tijdsehr. Ned. Ind. xxvii. p. 297 (1864).

Eos guebensis, Rosenb. Journ. f. Orn. 1862, p. 63 (Waigiou); id. Nat. Tijdschr. Ned. Ind. xxv. pp. 143, 225 (1863); id. Journ. f. Orn. 1864, p. 113, sp. 12.

Lorius (Eos) wallacei, Finsch, Journ. f. Orn. 1864, p. 411.

2. Eos. 27

Eos wallacei, Newt. Ibis, 1865, p. 340; G. R. Gr. Hand-list, ii. p. 155, sp. 8206 (1870) (ev. Waigiou, Guebé, Obi!); Salvad. Ann. Mus. Civ. Gen. x. p. 34, n. 70 (1877); id. Orn. Pap. e Mol. i. p. 255 (1880); Nehrk. Journ. f. Orn. 1885, p. 31; Guillem. P. Z. S. 1885, p. 621; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 169 (1889).

Domicella riciniata, part., Finsch, Papag. ii. p. 803 (1868).

Lorius riciniatus, var. wallacei, Brüggem. Abh. naturw. Ver. Brem. v. p. 42 (1876).

Domicella wallaćii, Rchnw. Journ. f. Orn. 1881, p. 167 (Consp. Psitt. p. 103); id. Vogelbild., in the text of pl. xxxi. (1878–83).

Adult. Red; a collar round the neck, abdomen, and under tail-coverts purple; primaries black, with the base of the inner web red; secondaries and greater wing-coverts red, with the tips black; some of the inner quills and the longest scapularies dull purple; tail above dull purple-red; tail-feathers underneath at the base of the inner web red, yellowish red with golden reflexions towards the tip; bill orange-red; feet dusky black. Total length 10·50 inches, wing 6, tail 4·10, bill 0·80, tarsus 0·7.

Young. Red; the feathers of the head, neck, back, breast, and sides with purple edges; ear-coverts tinged with purple; interscapular region and scapulars dusky purple; under tail-coverts

purplish red.

Hab. The western Papuan Islands—Waigiou, Guebé, Batanta, and a small island near Mysol.

a, b, d ♀ ad. sk. Waigiou. A. R. Wallace Coll c, d. Ad. sk. Waigiou (A. R. Wallace). Gould Coll.

#### 9. Eos insularis.

Eos insularis, Guillem. P. Z. S. 1885, p. 565, pl. xxxiv. (Weeda Isl.); Salvad. Ibis, 1886, p. 154; id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 149 (1889).

"This species much resembles *E. riciniata*, but differs in the following particulars. The occipital violet patch is very small, and is separated from the nuchal collar by a broad band of red. Both the nuchal and prepectoral violet collars are small, and the violet on the abdomen does not pass upwards on to the breast, thus leaving a broad red pectoral band. The iris is red, thus differing from *E. riciniata*, in which it is yellow; and, lastly, the latter species is of markedly smaller size, as will be seen on a comparison of the measurements. Iris red; bill orange, yellow at the tip; feet black. Total length 27·2–25·5 centim., wing 15·2–13·8 centim." (Guillemard.)

Hab. Weeda Islands, to the S.E. of Halmaheira.

I have seen one of the typical specimens, lent to me by the Hon. Walter Rothschild, and I must say that although sufficiently distinct from the ordinary specimens of *E. riciniata*, it is scarcely different from some specimens of *E. wallacei*; the only difference I can perceive is in the violet colour being a little duller in *E. insularis*, with scarcely any tinge of blue.

#### 10. Eos riciniata.

? Le petit Lori de Gueby, Sonnerat, Voy. à la Nour. Guin. p. 174, pl. 109 (1776).

? Gueby Lory, Lath. Syn. i. p. 219, n. 21 (1781).

Variegated Lory, Lath. Syn. i. p. 220, n. 22 (1781) (tail green!); id. Gen. Hist. ii. p. 137 (1822).

Psittacus guenbiensis, Scop. Del. Flor. et Faun. Insubr. p. 87, n. 28 (1786) (e.v. Sonnerat).

Cochinchina Parrot, Lath. Syn. Suppl. i. p. 65, no. 143 (1787) (false descr.); id. Gen. Hist. ii. p. 231 (1822).

Psittacus guebiensis, part., Gm. S. N. i. p. 318, n. 60 (1788); Lath. Ind. Orn. i. p. 90, n. 24 (partim); Bechst. Kurze Uebers. p. 70

(1811); Kuhl, Consp. Psitt. p. 39 (1820). Psittacus variegatus, Gm. S. N. i. p. 319, no. 62 (ex Latham) (1788); Lath, Ind. Orn. i. p. 90, no. 25 (1790); Bechst. Kurze Uebers. p. 70 (1811); Shaw, Gen. Zool. viii. p. 464 (1811); Vieill. N. D. xxv. p. 338 (1817); Kuhl, Consp. Psitt. p. 98 (1820); Vieill. Enc. Méth. p. 1381 (1823).

Psittacus cochinsiuensis, Lath. Ind. Orn. i. p. 116, no. 103 (1790).

Perruche à chaperon bleu, Levaill. Perr. pl. 54 (1801).

Psittacus riciniatus, Bechst. Kurze Uebers. p. 69, pl. 4 (1811); Kuhl, Consp. Psitt. p. 42 (1820); S. Müll. Verh. Land- en Volkenk. p. 107 (1839-1844).

Psittacus cochinchinensis, Bechst. Kurze Uebers. p. 94 (1811); Vieill. N. D. xxv. p. 310 (1817); Kuhl, Consp. Psitt. p. 99 (1820); Vieill. Enc. Méth. p. 1365 (1823).

Psittacus cucullatus, Shaw, Gen. Zool. viii. p. 461 (1811).

Gueby Lory, var. A, Lath. Gen. Hist. ii. p. 134 (1822).

Psittacus guebuensis, part., Vieill. Enc. Méth. p. 1380 (1823).

Lorius cucullatus, Steph. Gen. Zool. xiv. p. 132 (1826). Lorius isidorii, Sw. Zool. Ill. ser. 2, vol. i. pl. 8 (1829). Eos cochinchinensis, Wagl. Mon. Psitt. p. 500 (1832).

Eos variegata, Wagl. l. c. (1832).

Eos cochiusinensis, G. R. Gr. Gen. B. ii. p. 417, n. 4 (1845); id. List Psitt. Brit. Mus. p. 52 (1859); id. P. Z. S. 1860, p. 356; id.

Hand-list, ii. p. 154, sp. 8202 (1870). Eos isidorii, G. R. Gr. Gen. B. ii. p. 417, n. 6 (1845). Eos riciniata, Bp. P. Z. S. 1850, p. 29; id. Rev. et Mag. de Zool. 1854, p. 156, n. 285; id. Naumannia, 1856, Consp. Psitt. sp. 300; Sclat. P. Z. S. 1860, pp. 226, 227, 1862, p. 140; Wall. P. Z. S. 1864, p. 290: Sclat. P. Z. S. 1873, p. 684; Salvad. Ann. Mus. Civ. Gen. vii. p. 760 (1875), x. p. 34, n. 71 (1877); id. Orn. Pap. e Mol. i. p. 259 (1880); Sclat. List Vert. An. 8th ed. p. 319 (1883); Pleske, Bull. Acad. Pétersb. xxix. p. 523 (1884); Guillem. P. Z. S. 1885, p. 564; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 169 (1889); Tristr. Cat. Coll. B. p. 73 (1889).

Eos indica, var., G. R. Gr. List Psitt. Brit. Mus. p. 51 (1859). Eos ricinata, Rosenb. Journ. f. Orn. 1862, p. 62; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 141, 142 (1863); Bernst. Nat. Tijdschr. Ned.

Ind. xxvii. p. 294 (1864).

Lorius riciniatus, Schleg. Mus. P.-B. Psittaci, p. 125 (1864); Finsch, Neu-Guin. p. 157 (1865); Schleg. Ned. Tijdschr. Dierk. iii. p. 335 (1866); id. Mus. P.-B. Psittaci, Revue, p. 57 (1874); Gieb. Thes. Orn. ii. p. 502 (1875).

Domicella riciniata, part., Finsch, Papag. ii. p. 803 (1868); Rehnw. Journ. f. Orn. 1881, p. 166 (Consp. Psitt. p. 102); id. Vogelbild.

t. xxxi. f. 3 (1878-83).

29 2. Eos.

Lorius ricinatus, Rosenb. Reist. naar Geelvinkb. p. 6 (1875); Fischer, Abh. Brem. v. p. 538 (1878).

Adult. Red; occiput, nape, a collar round the neck, abdomen, and under tail-coverts purple; primaries black, with the base of the inner web red, secondaries and greater wing-coverts red with the tips black; some of the inner quills and the longest scapularies dull purple; tail above dull purple-red: tail-feathers underneath, at the base of the inner web red, yellowish red with golden reflexions towards the tips; bill orange-red; feet dusky black. Total length 10 inches, wing 5·6, tail 4, bill 0·78, tarsus 0·6.

Young. Head, neck, back, breast, and sides red, with dark olive narrow bands, only the tips of the feathers being red; occiput red; a purple cross band on the front neek; scapulars dark olive; under

tail-coverts red, edged with olive or yellowish olive.

Hab. The Halmahera group—Halmahera, Ternate, Motir, Tidore,

Batchian, Morty, Moor, Dammar, Makian, and Obi Islands.

Purchased. a. ♂ ad. st. b. of ad.; c. Ad. Halmahera. Wallace Coll. var. sk. d. of ad. sk. Ternate. Gould Coll. Ternate, July. L. Laglaize [C.]. e. Ad. sk.  $f, g. \text{Ad.}; h. \ \mathcal{Q}$ Batchian. Wallace Coll. ad. sk. Gould Coll. i, k. Ad. & yg. sk. Batchian (A. R. Wallace). Celebes. l. Ad. sk. Purchased. Capt. W. Chambers m. Ad. [Timor-laut.] [P.].

# 11. Eos rubiginosa.

Chalcopsitta rubiginosa, Bp. Consp. Av. i. p. 3 (1850); id. Compt. Rend. xxx. p. 134 (1850); id. P. Z. S. 1850, p. 26 (note), pl. xvi.; id. Rev. et Mag. de Zool. 1854, p. 156, n. 292; id. Naumannia, 1856, Consp. Psitt. n. 306; Sclat. P. Z. S. 1860, p. 227; Wall. Ibis, 1861, p. 290; G. R. Gr. P. Z. S. 1861, p. 436; Rosenb. Journ. f. Orn. 1862, p. 63; id. Nat. Tijdschr. Ned. Ind. xxv. p. 143 (1863); Wall. P. Z. S. 1864, pp. 289, 294; Pelz. Novara Reise, Vöy. p. 99 (1865); G. R. Gr. Hand-list, ii. p. 153, n. 8193 (1870); Tristr. Cat. Coll. B. p. 73 (1889).

Eos rubiginosa, G. R. Gr. List Psitt. Brit. Mus. p. 53 (1859); id. Cut. B. New Guin. pp. 40, 59 (1859); Rosenb. Journ. f. Orn. 1864,

p. 114; Salvad. Orn. Pap. e Mol. i. p. 267 (1880).

Lorius rubiginosus, Schleg. Mus. P.-B. Psittaci, p. 129 (1864);

Finsch, Neu-Guin. p. 157 (1865); Schleg. Mus. P.-B. Psittaci,

Revue, p. 58 (1874); Gieb. Thes. Orn. ii. p. 502 (1875).

Domicella rubiginosa, Finsch, Papag. ii. p. 781 (1868); id. P. Z. S.

1869, pp. 127, 128, 1872, p. 88.

Trichoglossus rubiginosus, Finsch, Journ. Mus. Godeffr. Heft xii. pp. 17, 18 (1876); id. P. Z. S. 1877, p. 778; id. Journ. f. Orn. 1880, p. 284; id. Ibis, 1881, pp. 110, 111, 114; Rehnw. Journ. f. Orn. 1881, p. 162 (Consp. Psitt. p. 98); id. Voyelbild. t. xxx. f. 6 (1878-83).

Adult. Dark cherry-red with a purplish tinge; feathers of the

LORIID.E.

breast, abdomen, and also of the back with purple-black edges; quills dark olive, beneath dusky black; tail above dark olive, beneath ochre-olive; bill yellow, or perhaps red in the living bird: feet blackish: iris red. Total length 9.50 inches, wing 5.40, tail 4, bill 0.80, tarsus 0.61.

Hab. Puynipet, Caroline Islands.

a. Ad. st. Waigiou. Purchased. b. Ad. sk. No locality. Gould Coll. Ponape, 6 March, 1880 (Dr. O. c. of ad. sk. Tweeddale Coll. Finsch). d. 2 ad. sk. Ponape (J. Kubary). Purchased.

#### 12. Eos fuscata.

Eos fuscata, Blyth, Journ. A. S. B. xxvii. p. 279 (1858); G. R. Gr. P. Z. S. 1859, p. 158; Wall. Ibis, 1859, p. 210; Sclat. P. Z. S. 1860, p. 227; G. R. Gr. P. Z. S. 1861, p. 436; Wall. P. Z. S. 1864, pp. 291, 295; Schleg. Dierent. p. 68 (with figure), p. 69 (1864); Sclat. P. Z. S. 1873, p. 697; Salvad. Ann. Mus. Civ. Gen. (1864); Schall F. Z. S. 1878, p. 067; Salvad, Ann. Ann. Stas. Cel. Oct., vii. p. 760 (1875); x. p. 34, n. 72, p. 122 (1877); D'Alb. Sydn. Mail, 1877, p. 248; id. Ann. Mus. Civ. Gen. x. p. 19 (1877); Ramsay, Pr. Linn. Soc. N. S. W. iii. p. 253 (1878), iv. p. 96 (1879); D'Alb. e Salvad. Ann. Mus. Civ. Gen. xiv. p. 37 (1879); Sharpe. Journ. Pr. Linn. Soc. xiv. pp. 628, 686 (1879); Salvad. Orn. Pap. e Mol. i. p. 263 (1880); Guillem. P. Z. S. 1885, p. 622; Chill. C. C. C. L. C. Chill. P. X. C. Chill. Soc. xiv. pp. 628, Salvad. Mon. Sharpe, Gould's B. New Guin. pt. xxi. pl. 3 (1886); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 169 (1889); Tristr. Cat. Coll. B. p. 73 (1889).

Eos (Chalcopsitta) torrida, G. R. Gr. List Psitt. Brit. Mus. p. 102

Eos leucopygialis, Rosenb. Journ. f. Orn. 1862, p. 64.

Chalcopsitta leucopygialis, Rosenb. Nat. Tijdschr. Ned. Ind. xxv. pp. 144, 224 (1863); id. Journ. f. Orn. 1864, p. 113, sp. 10.

Lorius fuscatus, Schleg. Mus. P.-B. Psittaci, p. 122 (1864); Finsch, Neu-Guin. p. 157 (1865); Schleg. Mus. P.-B. Psittaci, Revue, p. 55 (1874); Gieb. Thes. Orn. ii. p. 501 (1875); Rosenb. Reist.

naar Geelvinkb. p. 113 (1875).

Domicella fuscata, Finsch, Papag, ii. p. 807, t. 6 (1868); Meyer, Sitzb. k. Ak. Wissensch. Wien, 1xx. p. 236 (1874); id. Sitzb. Isis Dresd. 1875, p. 78; id. Ibis, 1875, p. 147; Rehnw. Journ. f. Orn. 1881, p. 164 (Consp. Psitt. p. 100); id. Vogelbild. t. xxxi. f. 9 (1878 - 83).

Chalcopsitta fuscata, G. R. Gr. Hand-list, ii. p. 153, sp. 8194

1870).

Chalcopsittacus fuscatus, Salvad. Ann. Mus. Civ. Gen. viii. p. 397

(1876).

Eos incondita, Meyer, Zeitschr. f. ges. Orn. 1886, p. 6, Taf. 1. f. 2; Sharpe, Nature, vol. 34. p. 340 (1886); Salvad. Mem. R. Ac. Sc. Tor. (2) xl. p. 169 (1889).

Adult. Dusky brown; vertex and a band on the nape reddish orange; a band across the throat and another across the breast, middle of the abdomen and tibiæ red; feathers of the hind neck, interscapular region, and lower throat edged with reddish or grevish, or

even with olive colour; lower back and uropygium yellowish white; under tail-coverts purple-blue; the wings show a purple tinge on the primary-coverts and on the anterior great coverts; the innermost great coverts and the inner secondaries have a tinge of chestnut; primaries with a slight tinge of olive on the outer edges, and with the inner web red towards the base; under wing-coverts partly red; tail above greyish purple, the central tail-feathers towards the base reddish; tail-feathers beneath red at the base of the inner web, reddish olive towards the tips: bill red or orange-yellow; feet dusky; iris red. Total length 10.5 inches, wing 6.3, tail 3.5, bill 0.88, tarsus 0.69.

Young. Yellow where the adult bird is red. Hab. New Guinea, Jobi, Salwatty.

a. Ad.; b, c. ♂♀ imm.; d.♀	Dorey. (Types	Wallace Coll. of <i>Eos torrida</i> , Gr.)
juv. e.♀ ad.; f. ♂	Dorey.	Wallace Coll.
imm. g, h. Ad.; ♂ imm. i, Ad. sk.	Dorey (A. R. Wallace). Amberbaki.	Gould Coll. L. Laglaize [C.].
$k$ , $l$ . Imm. & juv. $m$ , $\mathcal{D}$ ad.	New Guinea. S.E. New Guinea (R. Hunstein).	Tweeddale Coll. Tweeddale Coll.
n. o imm.	Mount Owen Stanley. Astrolabe Mountains.	C. Hunstein [C.]. Hon. H. Romilly
p, q. Imm.	Port Moresby.	[P.]. Gould Coll.
r. Imm.	Port Moresby.	K. Broadbent [C.].

#### 3. LORIUS.

Type.
Lorius\*, Vig. Zool. Journ. ii. p. 400 (1825) . . . . L. domicella.
Domicella, Wayl. Mon. Psitt. p. 495 (1832) . . . . L. domicella.

Range. From the Moluccas to the Solomon Islands.

# Key to the Species.

and the state of	
I. Pileum black.	
a. No yellow band across the crop region.	
a'. Under wing-coverts red.	
a". Abdomen purple	hypoenochrous, p. 32.
b". Abdomen blue.	
$a^{\prime\prime\prime}$ . Breast dark blue: the blue colour	
joining in the adult birds with	
the blue of the nape	lory, p. 33.
b'''. Breast red	erythrothorax, p. 35.
b'. Under wing-coverts blue.	
c". A band below the occiput red	jobiensis, p. 35.
d". No red band below the occiput	cyanauchen, p. 36.
b. A yellow band across the crop region.	
c'. Quills with the base of the inner web	
vellow	domicella, p. 37.

<sup>\*</sup> The genus Lorius is generally attributed to Brisson, who did not use the name in a generic sense.

d'. Quills with the base of the inner web red . . . . . . . . . . . . . . . . chlorocercus, p. 38. II. Pileum like the rest of the head red. a. Under wing-coverts light blue; tibiæ of a brighter blue ..... tibialis, p. 39. b. Under wing-coverts yellow. a'. Interscapular region red, often with a few yellow feathers in the middle ... garrulus, p. 39. b'. Interscapular region yellow ...... flavopalliatus, p. 41.

### 1. Lorius hypoenochrous.

? Psittarus lorv, Less. (nec Linn.), Voy. Coq. Zool. i. p. 342 (1826) (Nouvelle Irlande).

Lorius tricolor, part., G. R. Gr. P.Z. S. 1858, p. 194.

Lorius hypoinochrous, G. R. Gr. List Psitt. Brit. Mus. p. 49 (1859); id. Cat. B. New Guin. p. 39 (1859); id. P. Z. S. 1861, p. 436, id. Hand-list, ii. p. 153, sp. 8185 (1870); id. Cruise Curaçoa, Birds,

Hand-dist, B. p. 155, sp. 8185 (1870); id. Criuse Curaçoa, Birds, p. 380, pl. 14 (1873); Gieb. Thes. Orn. ii. p. 501 (1875). Lorius hypoenochrous, Wall. P.Z. S. 1864, p. 289; Sclat. P.Z. S. 1869, pp. 122, 124; id. P.Z. S. 1876, p. 460 (East New Guin.); id. Ibis, 1876, p. 364; id. P.Z. S. 1877, p. 108, 1878, p. 289; Salvad. Ann. Mus. Civ. Gen. x. p. 32, n. 55 (1877); Sclat. P. Z. S. 1879, p. 447; Salvad. Ibis, 1879, p. 365; id. Orn. Pap. e Mol. i. p. 221 (1880); Layard, Ibis, 1880, pp. 300, 306 (Admiralty Isl.!); Tristr. P. Z. S. 1881, p. 996; id. Ibis, 1882, p. 143 (Solomon Ramsay, Ibis, 1882, p. 473; Salvad. Orn. Pap. e Mol. iii. p. 518 (1882); Ramsay, Iris, 1882, p. 473; Salvad. Orn. Pap. e Mol. iii. p. 518 (1882); Ramsay, Pr. Linn. Soc. N. S. W. vii. p. 43 (1882); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 166 (1889); Tristr. Cat. Coll. B. p. 73 (1889).

Domicella hypoinochroa, Finsch, Papag. ii. p. 768 (1868); id. P. Z. S.

Domicella hypoenochroa, Finsch, P. Z. S. 1869, p. 127, 1879, p. 17; Rehnw. Journ. f. Orn. 1881, pp. 172, 396 (Consp. Psitt. pp. 108, 229); id. Vogelbild. t. xxxi. f. 5 (1878–83).

Lorius hypoenochroa, Cab. u. Rehnw. Journ. f. Orn. 1876, p. 324, n. 73.

Adult. Red; interscapular region with a cross band dark purplered; pileum black; lower abdomen, tibiæ, and under tail-coverts purple; wings green; under wing-coverts red; basal part of the inner web of the quills yellow; base of the tail red, the apical half purple tinged with greenish above, golden olive-yellow underneath; bill orange-red; feet blackish; iris searlet. Total length 11 inches, wing 6.8, tail 3.6, bill 1.05, tarsus 0.8.

Hab. Louisiade Archipelago, New Guinea near East Cape, New

Ireland, New Britain, and New Hanover.

Louisiade Archipelago, 30th Voyage ofH.M.S. a. ♂ ad. sk. 'Rattlesnake.' (Type June, 1849. of species.) b. ♀ ad. sk. St. Aignan, Louisiade Archi-Capt. G. E. Richards pelago, 10th Oct., 1879. C. Hunstein [C.]. c, d. of ad. sk. East Cape.

3. LORIUS.

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e, f. Ad. sk. Possession Bay, April 1874 Tweeddale Coll.

(Comrie). New Britain.

 $g. \ Q \ ad. \ sk.$ 

h. Ad. sk.

New Britain (Rev. G. Brown).

Rev. G. Brown [C.]. Tweeddale Coll.

## 2. Lorius lory.

? Psittacus orientalis exquisitus Loeri dictus, Seba, Thes. i. p. 37, f. 4 (1734).

First black-capped Lory, Edw. Birds, iv. pl. 170 (1751).

Ara moluccensis varia, Briss. Orn. iv. p. 197 (1760) (ex Seba).
 Lorius philippensis, Briss. Orn. iv. p. 225, pl. xxiii. f. 2 (1760);
 Hardl. Syst. Verz. Ges. Mus. p. 86 (1844); Horsf. & Moore, Cat.

B. Mus. E. I. Comp. ii. p. 629 (1858).

Psittacus lory, Linn. S. N. i. p. 145 (1766); Gm. S. N. i. p. 335,
n. 27 (1788); Lath. Ind. Orn. ii. p. 155, n. 98 (1790); Shaw, Nat. Misc. pl. 633 (1803?); id. Gen. Zool. viii. p. 534 (1812);
Bechst. Kurze Uebers. p. 92 (1811); Kuhl, Consp. Psitt. p. 41.

(1820); Vieill. Enc. Méth. p. 1380 (1823); Less. Voy. Coq. i.
p. 628 (1828); Voigt, Cuv. Uebers. p. 745 (1831); Temm. Tabl.
Méth. p. 60 (1839); S. Müll. Verh. Land-en Volkenk. p. 107 (1839-1844).

Lory des Philippines, D'Aub. Pl. Enl. 168.

Lory tricolor, Buff. Hist. Nat. Ois. vi. p. 132 (1779).

? Grand Perruche à bandeau noir, Buff. Hist. Nat. Ois. vi. p. 158 (1779).

? Black-crowned Parrot, Lath. Syn. i. p. 213 (1781); id. Gen. Hist. ii. p. 125 (1822).

Black capped Lory, *Lath. Syn.* i. p. 273, n. 78 (1781).

Psittacus atricapillus, Gm. Š. N. i. p. 317 (1788); Lath. Ind. Orn. i. p. 88, n. 18 (1790); Bechst. Kurze Uebers. p. 63 (1811); Vieill. Enc. Méth. p. 1387 (1823).

Lory à scapulaire bleu, Levaill. Perr. pls. 123, 124 (1805). Psittacus sebanus, Shaw, Gen. Zool. viii. p. 459 (1812).

Lorius tricolor, Steph. Gen. Zool. xiv. p. 132 (1826); Less. Voy Coq., Zool. i. p. 628 (1828); id. Tr. d'Orn. p. 192 (1831); G. K. Gr. Gen. B. ii. p. 416, n. 2 (1845); Bp. Rev. et May. de Zool. 1854, p. 156, sp. 282; id. Naumannia, 1856, Consp. Psitt. sp. 295; Souancé, Rev. et May. de Zool. 1856, p. 225; Sclat. Journ. Pr. Linu. Soc. ii. p. 165, sp. 108 (1858); G. R. Gr. P. Z. S. 1858, p. 194 (partim); id. Cat. B. New Guin. pp. 39, 59 (partim) (1859); id. P. Z. S. 1859, p. 158; Sclat. P. Z. S. 1860, p. 227; Wall. Ibis, 1861, p. 311; G. R. Gr. P. Z. S. 1861, p. 436; Rosenb. Wall. 1918, 1891, p. 311; G. R. Gr. P. Z. S. 1861, p. 436; Rosenb. Journ. f. Orn. 1862, pp. 63, 64; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 142, 143, 147, 225, sp. 17 (1863); Bernst. Nat. Tijdschr. Ned. Ind. xxvi. p. 297 (1864); Rosenb. Journ. f. Orn. 1864, p. 114, sp. 17; Schleg. Mus. P.-B. Psittaci, p. 118 (1864); Finsch, Neu-Guin. p. 157 (1865); Schleg. Mus. P.-B. Psittaci, Revue, p. 54 (1874); Garrod, P. Z. S. 1874, p. 587; Schlet. P. Z. S. 1874, p. 684; Gib. Theo. Orn. ii. p. 503 (1875); Endow. P. Z. S. 1874, p. 684; Gieb. Thes. Orn. ii. p. 503 (1875); Forbes, P. Z. S. 1879, p. 174, pl. xvi. f. 11; Selat. List Vert. An. 8th ed. p. 318 (1883).

Domicella lory, Wagl. Mon. Psitt. p. 568 (1832); Wall. Ann. &

Mag. N. H. (3) iii. p. 147 (1859).

Psittacus Iorius, Weinl. Journ. f. Orn. 1854, B. p. lxxv.

Lorius lory, Wall. Ann. & Mag. N. H. (3) iii. p. 148 (1859); id. P. Z. S. 1864, p. 288; Salvad. Ann. Mus. Civ. Gen. vii. p. 759 (1875), x. p. 32, n. 56, p. 122 (1877); id. Orn. Pap. e Mol. i.

p. 223 (1880); Nehrk. Journ. f. Orn. 1885, p. 31; Guillem. P. Z. S. 1885, p. 621; Salvad. Ibis, 1886, p. 154; id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 167 (1889); Meyer, Vogel-Skelett. t. lxix. (1878-89).

Lorius cyanauchen, Rosenb. (nec Müll.), Nat. Tijdschr. Ned. Ind. xxv. pp. 143, 225, sp. 18 (1863); id. Journ. f. Orn. 1864, p. 114,

sp. 18; Bernst. Dagboek, pp. 82, 126, 151 (1883).

Domicella lori, Finsch, Papag, ii. p. 769 (1868); Meyer, Sitzb. k. Ak. Wissensch. Wien, lxx. pp. 233, 238 (partim) (1874); id. Sitzb. Isis Dresd. 1875, p. 78 (partim); id. Ibis, 1875, p. 147; Rehnw. Vogelbild. t. xi. f. 2 (1878–83).

Lorius Iori, G. R. Gr. Hand-list, ii. p. 153, sp. 8187 (1870); Garrod, P. Z. S. 1874, p. 587; Salv. Cat. B. Strickl. Coll. p. 455 (1882);

Tristr. Cat. Coll. B. p. 73 (1889).

Domicella tricolor, Rchnw. Vogelbild. t. xi. f. 2 (1878-83); id. Journ. f. Orn. 1881, p. 172 (Consp. Psitt. p. 108). Eos (!) tricolor, Sclat. List Vert. An. 8th ed. p. 318 (1883).

Adult. Crown black; sides of the head, throat, sides of the breast and of the abdomen, lower back, uropygium and upper tailcoverts red; a band below the occiput and sometimes another across the interscapular region pale red; hind neck, interscapular region, and breast blue; the blue of the breast is joined with that on the hind neck; abdomen, tibiæ, and under tail-coverts brighter blue; wings green, some of the upper wing-coverts and of the inner quills tinged with golden olive; under wing-coverts red; the base of the inner web of the quills yellow; tail above dark red at the base, greenish in the middle, dark blue at the apical half, underneath bright red at the base, golden-olive towards the tip: bill red; feet black; iris pale yellow. Total length 12 inches, wing 6.4, tail 4.1, bill 1, tarsus 8.

Imm. The blue of the breast is not joined to that of the hind

neck.

Young. No red band below the occiput; interscapular region greenish; a blue collar round the neck; the upper breast red; the greater under wing-coverts yellow with black tips, the smaller and median ones mingled with green, blue, and red; the middle part of the tail above greenish.

Hab. North-western New Guinea, Salwatty, Batanta, Waigiou,

and Mysol.

a. ♂ ad.; b. ♀ Dorey. A. R. Wallace Coll. Juv.; c. Juv. sk. Salwatty, July. d. 3 ad. sk. Tweeddale Coll. e. & ad. sk. Waigiou. A. R. Wallace Coll. f. ♀ ad. sk.
g. ♀ ad. sk. Waigiou (A. R. Wallace). Gould Coll. Mysol, July (von Rosenberg). Tweeddale Coll. h. 2 ad.? sk. New Guinea. Dr. A. B. Meyer [C.]. i. Ad. st. [Philippine Isl., wrong locality.] Laugier Coll. k. Ad. var. st. No exact locality. Purchased. l. Imm. st. No locality. Purchased.

## 3. Lorius erythrothorax.

Domicella lory, part., Meyer, Sitzb. k. Ak. Wissensch. Wien, lxx. p. 227 (Rubi) (1874).

Lorius lory, Salvad. & D'Alb. (nec Linn.), Ann. Mus. Civ. Gen. vii. p. 812 (1875); D'Alb. Sydn. Mail, 1877, p. 248; id. Ann. Mus. Civ. Gen. x. p. 19 (1877).

Lorius erythrothorax, Salvad, Ann. Mus. Civ. Gen. x. p. 32, n. 57 (1887); D'Alb. & Salvad. op. cit. xiv. p. 39 (1879); Salvad. Ibis, 1879, p. 320; id. Orn. Pap. e Mol. i. p. 230 (1880); Sharpe, Journ. Linn. Soc., Zool. xvi. p. 426 (1882); Salvad. Orn. Pap. e Mol. iii. p. 518 (1882); Finsch u. Meyer, Zeitschr. f. ges. Orn. 1886, p. 5; Salvad. Ibis, 1886, p. 154; id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 167 (1889); Tristr. Cat. Coll. B. p. 73 (1889); Meyer, *Ibis*, 1890, p. 413.

Lorius hypoenochrous, var., Ramsay, Pr. Linn. Soc. N. S. W. iii.

p. 72 (1878); Rehnw. & Schal. Journ. f. Orn. 1880, p. 208. Lorius guglielmi, Ramsay, l. c. p. 73 (1878); Rehnw. & Schal. Journ. f. Orn. 1880, p. 208; Rehnw. Journ. f. Orn. 1881, p. 397 (Consp. Psitt. p. 229).

Lorius hypoenochrous, var. guglielmi, Ramsay, l. c. p. 106 (1878). Lorius hypoenochrous, Ramsay (nec Gray), l. c. p. 254 (1878), iv. p. 96 (partim) (1879).

Domicella erythrothorax, Rehnw. Journ. f. Orn. 1881, p. 173 (Consp. Psitt. p. 109); id. Vogelbild. Nachtr. 43 (1883).

Adult. Very much like the adult of L. lory, from which it differs in having the upper breast entirely red, so that the blue of the underparts is not joined to the blue of the hind neck and interscapular region; it seems also that in the present species the red band across the blue interscapular region is constant. Dimensions as in L. lory.

Hab. New Guinea, from Port Moresby, through the Fly River region to Rubi district in the southern part of Geelvink Bay.

a. Ad. sk. Goldie River. A. Goldie [C.]. b. Ad. sk. Astrolabe Mts. A. Goldie [C.] c. Ad. sk. S.E. New Guinea (A. Goldie). Tweeddale Coll. d, e, f. Ad. sk.; Astrolabe Mts. Hon. H. Romilly g. Juv. sk. [C.]. h. Juv. sk. S. New Guinea. Purchased.

# 4. Lorius jobiensis.

Domicella cyanauchen, part., Schleg. Mus. P.-B. Psittaci, Revue,

p. 54 (1854).

Domicella lori, var. jobiensis, Meyer, Sitzb. k. Ak. Wissensch. Wien, lxx. pp. 229, 231, 233 (1874) (type examined); id. Ibis, 1875, p. 147. Lorius tricolor, Rosenb. (nec Steph.), Reist. naar Geelvinkb. p. 56 (1875).

Lorius jobiensis, Salvad. Ann. Mus. Civ. Gen. vii. p. 759 (1875), x. p. 32, n. 58 (1877); id. Orn. Pap. e Mol. i. p. 232 (1880); id. Mem.

R. Ac. Sc. Tor. ser. 2, xl. p. 167 (1889).

Domicella jobiensis, Meyer, Sitzh. İsis Dresd. 1875, p. 78; Rehnw. Journ. f. Orn. 1881, p. 173 (Consp. Psitt. p. 109); id. Voyelbild. Nachtr. 43 (1883).

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m D}$   $^2$ 

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Adult. Very much like L. lory, from which it differs in having the under wing-coverts blue, except the greater ones which are black, more or less mingled with yellow at the base; the upper breast is constantly red; the blue colour of the nape extends on the sides of the neck in a sort of an incipient collar; on the interscapular region there is constantly a red band across; size generally larger than in L. lory. Total length 12.9-11.18 inches, wing 7.07-6.68, tail 4.71-4.12, bill 1.18-1.10, tarsus 0.90.

Hab. Jobi and Miosnom.

## Lorius cyanauchen.

Psittacus evanauchen, S. Müll. Verh. Land- en Volkenk. p. 107 (1839-1844) (type examined); Wiegm. Arch. f. Naturg. 1842, 2, p. 79; G. R. Gr. Gen. B. ii. p. 421, n. 33 (1846). Lorius superbus, Fras. P. Z. S. 1845, p. 16; G. R. Gr. Gen. B. ii. p. 416, n. 6 (1845); Fras. Zool. Typ. pl. 55 (1849); Rosenb.

Journ. f. Orn. 1862, pp. 65, 68.

Lorius cyanauchen, Souancé. Rev. et Mag. de Zool. 1856, p. 225; Bp. Naumannia, 1856, Consp. Psitt. sp. 296; Blyth, Journ. As. Soc. B. xxvii. p. (1858); Ibis, 1859, p. 201; G. R. Gr. List Psitt. Brit. Mus. p. 50 (1859); id. P. Z. S. 1859, p. 158; Sclat. P. Z. S. 1860, p. 227; Wall. P. Z. S. 1861, p. 289; Schleg. Mus. P.-B. Psittaci, p. 50 (1864); Wall. Ibis, 1865, p. 395: Finsch, Neu-Guin. p. 157 (1865); G. R. Gr. Hand-list, ii. p. 153, sp. 8188 (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 54 (partim) (1874); Gieb. Thes. Orn. ii. p. 500 (1875): Rosenb. Reist. naar Geelvinkb. p. 47 (1875); Salvad. Aun. Mus. Civ. Gen. vii. p. 759 (1875), x. p. 32, n. 59 (1877); id. P. Z. S. 1878, p. 79 (note); id. Orn. Pap. e Mol. i. p. 234 (1880); id. Voy. Chall., Birds, p. 60 (1881); id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 167 (1889); Meyer, Vogel-Skelett. t. lxviii. (1879-88).

Lorius speciosus, Rosenb. Nat. Tijdschr. Ned. Ind. xxv. pp. 144, 225,
sp. 19 (1863); id. Journ. f. Orn. 1864, p. 114, sp. 19.
Lorius cyanocinctus, Rosenb. Nat. Tijdschr. Ned. Ind. xxv. p. 145

(1863).

Domicella cyanauchen, Finsch, Papag. ii. p. 773 (1868); Meyer, Sitzb. k. Åk. Wiss. Wien, lxx. pp. 229, 232 (1874); id. Ibi, 1875, p. 147; id. Sitzb. Isis Dresd. 1875, p. 78; Rehnw. Vogelbild. t. xi. f. 1 (1878–83); id. Journ. f. Orn. 1881, p. 173 (Consp. Psitt. p. 109).

Domicella lori mysorensis, Meyer, Sitzb. k. Ak. Wiss. Wien, lxx. p. 233 (1874).

Adult. Very much like L. jobiensis, only wanting the red band below the occiput.

Hab. Mysore.

a. Ad. st. Zoological Society. (Type of Lorius superbus, Fras.) Purchased. b. Ad. sk. c, d. d 2 ad sk. [Mafoor.] Wallace Coll. Mafoor (A. R. Wallace). e. Ad. sk. Gould Coll. f. 2 ad. sk. 'Challenger' Exped. No exact locality. g. Imm. sk. Mysore (Dr. A. B. Meyer). Tweeddale Coll.

## 6. Lorius domicella.

Second black-capped Lory, Edw. Birds, iv. p. 171 (1751).

Second black-capped Lory, Euler, Birds, N. p. 111 (1777). Lorius orientalis indicus, Briss. Orn. iv. p. 222, pl. xxiv. f. 1 (1760). Lorius torquatus indicus, Briss. Orn. iv. p. 230 (1760). Psittacus domicella. Linn. S. N. i. p. 145 (1766); Gm. S. N. i. p. 334, n. 26 (1788); Lath. Ind. Orn. i. p. 114, n. 97 (1790); Shaw, Gen. Zool. viii. p. 535, pl. 81 (1811); Bechst. Kurze Vebers. 9. 92 (1811): Kuhl. Consp. Psitt. p. 40 (1820): Vicill. Enc. Méth. p. 1377 (1823); Less. Voy. Coq., Zool. i. p. 627 (1828): Voigt, Cuv. Uebers. p. 744 (1831); Hahn, Orn. Atlas, Papag. t. 42 (1834): Temm. Tabl. Méth. p. 60 (1839); S. Müll. Verh. Landen Volkenk, p. 107 (1839-44); Weinl, Journ, f. Orn. 1854, B. p. lxxv: Brehm, Mon. d. Papag. t. 67 (1855).

Lory des Indes Orientales, D'Aub, Pl. Enl. S4 (var.). Lory male des Indes Orientales, D'Aub, Pl. Ent. 119. Lory à collier, Buff. Hist. Nat. Ois. vi. p. 130 (1779). Purple capped Lory, Lath. Syn. Av. i. p. 271 (1781); id. Gen. Hist.

ii, p. 225 (1882).

Perroquet Lori Radhia, Levaill. Perr. pl. 94 (var.) (1801). Perroquet Luri à collier jaune, Levaill. Perr. pl. 95 (1801). Perroquet Lori à collier (var.), Levaill. Perr. pl. 95 bis (1801). Psittacus rex, Bechst. Kurze Vebers, p. 92 (1811). Psittacus raja, Shaw, Gen. Zool. viii. p. 537, pl. 82 (1811).

Psittacus radhea, Vieill. N. D. xxv. p. 337 (1817); id. Enc. Meth. p. 1380 (1823).

Rajah Lorv, Lath. Gen. Hist. ii. p. 226 (1822).

Lorius domicella, Vig. Zool. Journ. ii, p. 400 (1825); Steph. Gen.
Zool. xiv. p. 132 (1826); Less. Voy. Coq., Zool. i. p. 627 (Dorey!) (1828); id. Tr. d'Orn. p. 192 (1831); Lear. Illustr. Parr. pl. 37 (1832); Selb. Nat. Libr., Orn. vi. p. 146, pl. 18 (1836); Thienem. Fortpflanz, d. ges. Vög. p. 76 (1845); G. R. Gr. Gen. B. ii. p. 416, n. 1 (1845); Blyth, Cat. B. Mus. A. S. B. p. 10 (1849); Bp. Rev. et Mag. de Zool. 1854, p. 156, n. 281; id. Naumannia, 1856, Consp. Psitt. sp. 292; Bolle, Journ. f. Orn. 1855, p. 170; Cassin, Narr. Exp. Perry, ii. p. 241 (1856); Journ. f. Orn. 1858, p. 449 (Singapore!); Horsf. & Moore, Cat. B. Mus. E. I. Comp. 262 (1858); State Lang. B. Ling. See ii. p. 1655 (1858). ii. p. 630 (1858); Sclat. Journ. Pr. Linn. Soc. ii. p. 165 (1858); G. R. Gr. List Psitt. Brit. Mus. p. 49 (1859); id. Cat. B. New Guin. pp. 39, 59 (1859); Wall. Ibis, 1860, p. 306; G. R. Gr. P. Z. S. 1860, p. 356, 1861, p. 436; Wall. Ibis, 1861, pp. 286, 311; Rosenb. Journ. f. Orn. 1862, p. 61; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 140, 141 (1863); Finsch. Ned. Tijdschr. Dierk. i. Berigten, p. xviii (1863); Wall. P. Z. S. 1864, p. 288; Schleg. Mus. P.-B. Psittaci, p. 120 (1864); Fins h. Neu-Guin. p. 156 (1865); Pelz. Verh. z.-b. Gesellsch. Wien. 1865, p. 923 (var.); G. R. Gr. Hand-list, ii. p. 153, sp. 8184 (1870): Schleg. Mus. P.-B. Psittaci, Revue, p. 55 (1874); Gieb. Thes. Orn. ii. p. 500 (1875): Salvad. Ann. Mus. Cir. x. p. 32, n. 60 (1877); Garrod, P. Z. S. 1876, p. 692: Salvad. P. Z. S. 1878, p. 79; Forbes, P. Z. S. 1879, p. 170 (note); Salvad. Orn. Pap. e Mol. i. p. 236 (1880); id. Voy. Chall., Birds. p. 60 (1881); Elas, u. Nehrk. Verh. z.-b. Gesellsch. Wien, 1882. p. 416; Selat. List Vert. An. 8th ed. p. 317 (1883); Guillem. P. Z. S. 1885. p. 504; Salvad. Mem. R. Ac. 8c.

Tor. ser. 2, xl. p. 167 (1889): Tristr. Cat. Coll. B. p. 73 (1889).

Domicella atricapilla. Wagl. Mon. Psitt. p. 597 (1832): Nitzsch, Pterylogr. Engl. ed. p. 100 (1867): Finsch. Papag. ii. p. 763 (1868); Lenz. J.urn. f. Orn. 1877, p. 364: Rehnw. Vogelbild.

t. iii. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 171 (Consp. Psitt.

Domicella domicella, Wall. Ann. & Mag. N. H. (3) iii. p. 148 (1859).

Lorius domicellus, Gulliv. P. Z. S. 1875, p. 489.

Adult. Red, the back and the scapulars a little darker; pileum black, occiput violet, a yellow band, somewhat hidden, across the crop region; wings green; wing-coverts and quills next to the back olive-green; bend of the wing and under wing-coverts blue, with whitish tips; tibiæ blue; quills with the base of the inner web yellow; tail red, with a band at the tip, above dark purple-red, below golden red: bill orange-red; feet black; iris brown, with an inner ring yellow. Total length 12 inches, wing 6.9, tail 4, bill 1.1, tarsus 0.8.

Young. Has the interscapular region partly tinged with green, and the feathers of the tibiæ mostly dull green.

Hab. Ceram and Amboyna.

a. Ad. st. b. c. Ad. sk. d. Var. sk. e. Ad. sk. f. ♂ ad. sk. y. Ad. sk. h. Juv. sk.	Moluccas, Ceram. Ceram. Ceram. Amboina. No locality. [Waigiou *.]	Zoological Society. A. R. Wallace Coll. A. R. Wallace Coll. Gould Coll. Wallace Coll. Tweeddale Coll. Wallace Coll. Lenging Cell
i. Var. sk. k. Skeleton.	[ Waigiou *.] Moluccas.	Wallace Coll. Laugier Coll.

### 7. Lorius chlorocercus.

Lorius chlorocercus, Gould, P. Z. S. 1856, p. 137; G. R. Gr. List Psitt. Brit. Mus. p. 49 (1859); id. Cat. B. Trop. Isl. p. 31 (1859); Sclat. P. Z. S. 1860, p. 228; Wall. P. Z. S. 1864, p. 289; Sclat. Sclat. P. Z. S. 1860, p. 228; Wall. P. Z. S. 1804, p. 289; Sclat. P. Z. S. 1867, p. 183, pl. xvi., 1869, pp. 118, 122, 124; G. R. Gr. Hand-list, îi. p. 153, sp. 8185 (1870); Gieb. Thes. Orn. ii. p. 500 (1875); Rumsay, Pr. Linn. Soc. N. S. W. i. p. 67 (1876); Salvad. Ann. Mus. Civ. Gen. x. p. 33, no. 61 (1877), iv. p. 68 (1879); id. Nature, xx. p. 125 (1879); Layard, Ibis, 1879, p. 365; Tristr. Ibis, 1879, p. 442; Layard, Ibis, 1880, p. 293; Salvad. Orn. Pap. e Mol. i. p. 239 (1880); Ramsay, Pr. Linn. Soc. N. S. W. vii. p. 33 (1882); Tristr. Ibis, 1882, pp. 138, 143; Salut. List. Unit. An. 8th ed. p. 318 (1883); Grant. P. Z. S. 1888. Sclut. List Vert. An. 8th ed. p. 318 (1883); Grant, P. Z. S. 1888, pp. 187, 190; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 167 (1889); Trietr. Cat. Coll. B. p. 73 (1889).

Lorius chloronotus (errore), Bp. Naumannia, 1856, Consp. Psitt.

sp. 293.

Domicella chlorocerca, Finsch, Papag. ii. p. 767 (1868); id. P. Z. S. 1869, p. 127; Rehnw. Journ. f. Orn. 1881, p. 171 (Consp. Psitt. p. 107); id. Vogelbild. t. xxxi. f. 8 (1878-83).

Adult. Red; pileum as far as the occiput black; a wide yellow band across the crop region; on each side of the neck a black

<sup>\*</sup> Evidently a cage-bird; the locality is certainly wrong; perhaps Wallace bought it in Waigiou.

patch; wings green; under wing-coverts and tibiæ blue; bend of the wing bluish white; the base of the inner web of the primaries red; tail red at the base, the apical half green above, golden olive below: bill orange-red; feet black; iris bright red or pale orange. Total length 11 inches, wing 6.7, tail 3.9, bill 0.95, tarsus 0.72.

Hab. Solomon Islands.

a. d ad. sk.	San Cristoval, 16th Dec., 1854 (MacGillivray).	Voyage of H.M.S. 'Herald.'
b. Ad. st.	Solomon Isl.	(Type of species.) Zoological Society.
c. Ad. sk.	Ulaua, Aug. 1865.	J. Brenchley, Esq. [P.].
d. Ad. sk.	Ugi, Sept. 1865.	J. Brenchley, Esq. [P.]. Tweeddale Coll.
e. ♀ ad. sk. f. ♂ ad. sk.	Ulaua, Aug. 1865. Ugi, 12th Sept., 1880.	Tweeddale Coll.
g. & juv. sk.	Guadaleanar, March.	Purchased.
h. Sternum.		

#### 8. Lorius tibialis.

Lorius tibialis, Sclat. P. Z. S. 1871, pp. 499, 544, pl. xl.; id. Ibis, 1871, p. 372; Garrod, P. Z. S. 1872, p. 788 (cum figura capitis et linguæ); Gieb. Thes. Orn. ii. p. 503 (1875); Sclat. P. Z. S. 1875, p. 62; Salvad. Ann. Mus. Civ. Gen. x. p. 33, n. 62 (1877); Forbes, Ibis, 1877, p. 278; Salvad. Orn. Pap. e Mol. i. p. 240 (1880); Sclat. List Vert. An. 8th ed. p. 318 (1883); Sharpe, Gould's B. New Guin. pt. xxv. pl. 3 (1888); Salvad. Mem. R. Ac. Se. Tor. ser. 2, xl. p. 167 (1889).

Domicella tibialis, Rehnic. Jown. f. Orn. 1881, p. 170 (Consp. Psitt. p. 106); id. Vogelbild. t. xxxi. f. 7 (1878-83).

Adult. Red, a yellow band, somewhat hidden, across the crop region; wings green, some of the upper wing-coverts and of the quills next to the back stained with dull red; bend of the wing and under wing-coverts blue, with whitish tips; tibiæ blue; quills with the base of the inner web yellow; tail red, with a dark purple band at the tip; bill orange; feet pale. Total length 11.5 inches, wing 6.6, tail 3.8, bill 1, tarsus 0.7.

Hab. Unknown.

The only specimen known is the type. This bird is very much like L. domicella, from which it differs especially in the head, which is entirely red and has no black cap.

Ad. sk. Zoological Soc. Gardens. (Type of species.)

## 9. Lorius garrulus.

Scarlet Lory, Edw. Birds, iv. pl. 172 (1751).
Lorius ceramensis, Briss. Orn. iv. p. 215 (1760) (var.); Gulliv. P. Z. S. 1875, p. 489.
Lorius meluccensis, Briss. Orn. iv. p. 219, t. xxiii. f. 1 (1760).
Psittacus garrulus, Linn. Mus. Ad. Fr. ii. p. 14 (1764); id. S. N. i. p. 144 (1766); Gm. S. N. i. p. 333 (1788); Lath. Ind. Orn. i. p. 113 (1790); Shaw, Nat. Misc. pl. 925 (1789-1813); id. Gen. Hist.

viii. p. 536 (1812); Bechst. Kurze Uebers, p. 91 (1811); Kuhl, Consp. Psitt. p. 41 (1820); Vieill. Enc. Méth. p. 1377 (1823); Less. Voy. Coq., Zool. i. p. 628 (1828); Voigt, Cuv. Uebers. p. 745 (1831); Meyen, Nova Act. Leop.-Car. Acad. Suppl. i. d. 16ten B. p. 95 (1834); Temm. Tabl. Méth. p. 60 (1839); S. Müll. Verh. Land- en Volkenk. p. 167 (1839-44); Weinl. Journ. f. Ovn. 1854, B. p. 1xxv.

Psittacus garrulus, var. \(\beta\). Psittacus auror\(\text{e}\), \(Lin\), \(S. N.\) i. p. 144 (1766); \(Gm. S. N.\) i. p. 333 (1788); \(Lath. Ind. Orn.\) i. p. 113

(1790).

Lory des Moluques, Daub. Pl. Enl. 216.

Lory-noira, Buff. Hist. Nat. Ois. vi. p. 127 (1779).

Variété I. du Noira, *Buff. ibid.* p. 129. Variété II. du Noira, *Buff. ibid.* p. 129.

Ceram Lory, Lath. Syn. i. p. 269, no. 76 (1781).

Ceram Lory, var. A. Noira Lory, Lath. Syn. i. p. 270 (1781); id. Gen. Hist. ii. p. 224 (1822).

Ceram Lory, var. B. Scarlet Lory, Lath. Syn. i. p. 270 (1781); id. Gen. Hist. ii. p. 225 (1822).

Lory Nouara, Levaill. Perr. pl. 96 (1801).

Psittacus Noira, Vieill. Enc. Méth. p. 1378 (1823).

Lorius garrulus, Steph. Gen. Zool. xiv. p. 132 (1826); Sw. Zool. Ill. 2nd ser. pl. 12 (1829) (var.); Less. Tr. d'Orn. p. 192 (1831); Hartl. Syst. Verz. Ges. Mus. p. 86 (1844); G. R. Gr. Gen. B. ii. p. 416, n. 5 (1845); Bp. Rev. et Mag. de Zool. 1854, p. 156, n. 280; Weinland, Journ. f. Orn. 1854, B. p. 1xxi, Taf. ii. ff. 1-9 (tongue); Bp. Naumannia, 1856, Consp. Psitt. sp. 294; G. R. Gr. List Psitt. Brit. Mus. p. 50 (1859); Wall. Ibis, 1860, p. 198; Selat. P. Z. S. 1860, p. 226; Rosenb. Journ. f. Orn. 1862, p. 62 (partim); id. Nat. Tydschr. Ned. Ind. xxv. pp. 141, 142 (1863); Wall. P. Z. S. 1864, p. 289 (partim); Schleg. Mus. P.-B. Psittaci, p. 120 (partim) (1864); Bernst. Nat. Tidjschr. Ned. Ind. xxvii. p. 295 (1864); id. Ned. Tydschr. Dierk. ii. p. 325 (1865); Finsch. Neu-Guin. p. 157 (partim) (1865); Pelz. Novara Reis., Vög. p. 98 (1865); G. R. Gr. Hand-list, ii. p. 153, sp. 8189 (partim) (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 55 (partim) (1874); Gieb. Thes. Orn. ii. p. 501 (partim) (1875); Salvad. Ann. Mus. Civ. Gen. vii. p. 759 (1875), x. p. 33, n. 63 (1877); Forbes, P. Z. S. 1829, p. 170 (note); Salvad. Orn. Pap. e Mol. i. p. 241 (1880); Selat. List Vert. An. 8th ed. p. 317 (1883); Blas. Zeitschr. f. ges. Orn. 1886, p. 84; Salvad. Men. R. Ac. Sc. Tor. ser. 2, xl. p. 168 (1889); Tristr. Cat. Coll. B. p. 73 (1889).

Domicella garrula, Wagl. Mon. Psitt. p. 570 (1832); Wagl. Ann. & Mag. (3) iii. p. 147 (1859); Nitzsch, Pterylogr. (Engl. ed.) p. 100 (1862); Finsch, Papay. ii. p. 776 (partim) (1868); Rchnw. Vogelbild. t. iii. f. 5 (1878-83); id. Journ. f. Orn. 1881, p. 170 (Consp. Psitt.

p. 106).

Lorius garrulus, var., G. R. Gr. P. Z. S. 1860, p. 356 (partim).

Adult. Red; interscapular region red, with small yellow spots, sometimes with no spots at all; tibiæ dark green; wings green, with an olive tinge on the upper wing-coverts; bend of the wing and under wing-coverts yellow; base of the inner webs of the primaries red; tail with the basal half red, and with the apical half dark purple tinged with green above, golden red underneath; bill red; feet dusky; iris dark yellow, with an inner ring brighter

yellow. Total length 12 inches, wing 7.2, tail 4.5, bill 1.05, tarsus 0.8.

Hab. Halmahera.

a, b. ♂ ad. sk. Gilolo. Wallace Coll. c, d. Ad. sk. [Celebes.] Gould Coll. e. Ad. sk. Gould Coll. Menado. [New Guinea.] f. Ad. sk. Tweeddale Coll. Bought alive at Ternate. g. Juv. sk. 'Challenger' Exped. h. Ad. st. Moluccas. Purchased. i, k, l. Skeletons.

### 10. Lorius flavo-palliatus.

Lorius garrulus, Sclat. P. Z. S. 1860, p. 226 (nec p. 227) (ex Batjan); Rosenb. Journ. f. Orn. 1860, p. 62 (partim); id. Nat. Tijdschr. Ned. Ind. xxiii. p. 141 (nec p. 142) (1862); Wall. P. Z. S. 1864, p. 289, n. 65 (partim); Schleg. Mus. P.-B. Psittaci, p. 121 (partim) (ex Batjan, Morotai, et Raou); Finsch, Neu-Guin. p. 157 (partim) (ex Batjan, Morotai, Obi) (1865); G. R. Gr. Hand-list, ii. p. 153, sp. 8189 (partim) (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 55 (partim) (1874) (ex Batjan, Morotai, Obi); Gieb. Thes. Orn. ii. p. 501 (partim) (1875).

Lorius garrulus, G. R. Gr. P. Z. S. 1860, p. 356 (partim, ex Batjan). Domicella garrula, part., Finsch, Papag. ii. p. 776 (1868) (ex Batjan,

Morotai, Raou).

Lorius flavopalliatus, Salvad. Ann. Mus. Civ. Gen. x. p. 33, n. 64
(1877); id. Orn. Pap. e Mol. i. p. 243 (1880); Sclat. List Vert.
An. 8th ed. p. 318 (1883); Guillem. P. Z. S. 1885, p. 564; Sharpe,
Gould's B. New Guin, pt. xxiv. pl. 5 (1888); Salvad. Mem. R.

Ac. Sc. Tor. ser. 2, xl. p. 168 (1889).
Domicella flavopalliata, Rehnw. Journ. f. Orn. 1881, p. 170 (Consp. Psitt. p. 106); id. Vogelbild. Nachtr. 42 (1883).

Adult. Very much like L. garrulus, from which it differs in having a broad yellow patch on the interscapular region.

Hab. Obi, Batchian, Morotai, Raou.

a, b. Ad. st.	Moluccas.	Purchased.
c, d. 3 ad. sk.	Batchian.	Wallace Coll.
e. Ad. sk.	Batchian.	Wallace Coll.
f. 3 ad. sk.	Batchian (A. R. Wallace).	Gould Coll.
g. ♀ ad. sk.	[Gilolo.]	A. R. Wallace.
h. Ad. sk.	Batchian.	Zoological Society.
i. Ad. sk.	[Amboina.]	Tweeddale Coll.

4. CALLIPTILUS.	Type.
Phigys*, G. R. Gr. Hand-list, ii. p. 154, n. 2043	1 J P.
(1870)	C. solitarius.
Calliptilus, Sund. Meth. nat. av. disp. Tent. p. 71	0 2
$(1872) \dots	C. solitarius.
Range. Fiji Islands.	

\* The term *Phigys*, generally attributed to Lesson (Tr. d'Orn. p. 193, 1831), was not used by him as a generic name, but as a French name for the second tribe of the subgenus *Lorius*.

# Calliptilus solitarius.

Solitary Parrot, Lath. Syn. Suppl. i. p. 65 (1787); id. Gen. Hist. ii. p. 190 (1822).

La Perruche Phigy, Levaill. Perr. pl. 64 (1801).

-Psittacus solitarius, Lath. Ind. Orn. Suppl. ii. p. xxxii, n. 12 (1802); Vieill. N. D. xxv. p. 377 (1817); Kuhl, Consp. Psitt. p. 101 (1820); Vieill. Enc. Méth. iii. p. 1408 (1823).

Psittacus vaillanti, Shaw, Nat. Misc. pl. 909 (1809).

Psittacus coccineus, Shaw, Gen. Zool. viii. 2, p. 472 (1811); Vieill. N. D. xxv. p. 355 (1812); id. Enc. Méth. iii. p. 1391 (1823); Less. Voy. Coq. i. p. 629 (1828).

Psittaeus phigy, Bechst. Kurze Ueb. p. 81, pl. 9. f. 2 (1811); Kuhl, Consp. Psitt. p. 69 (1820); Voigt, Cuv. Uebers. p. 748 (1831). Brotogeris? phigy, Steph. Gen. Zool. xiv. 2, p. 133 (1826).

Lorius phigy, Less. Tr. d'Orn. p. 193 (1831).

Coriphilus solitarius, Wagl. Mon. Psitt. p. 565 (1832); G.R. Gr. Gen. B. ii. p. 417, n. 4 (1845); Havtl. Wiegm. Arch. 1852, p. 132; id. Journ. f. Orn. 1854, p. 168; Bp. Rev. et Mag. de Zool. 1854, p. 157, n. 313; id. Naumannia, 1856, Consp. Psitt. p. 327; Cass. U. St. Expl. Exp., Orn. p. 240 (1858); G.R. Gr. List Psitt. Brit. Mus. p. 51 (1859); id. Cat. B. Trop. Isl. p. 32 (1859); G.R. Gr. P. Z. S. 1860, p. 357; Rehne. Journ. f. Orn. 1881, p. 175 (Consp. Psitt. p. 111); id. Vogelbild. text of pl. xxi. f. 5 and pl. xxx. f. 8 (1878-83); Tristr. Cat. Coll. B. pp. 74, 75 (1889).

Brotogeris coccineus, Sw. Class. B. ii. p. 363 (1837). Vini coccineus, Less. Compl. de Buff. ix. p. 207 (1837); id. op. cit. 2nd ed. p. 606, n. 2 (1838).

Trichoglossus coccineus, Peale, U. St. Expl. Exp. p. 129 (1848), fide

Hartl. Wiegm. Archiv, 1852, p. 106.

Lorius solitarius, Schleg. Dierent. p. 68 (1864); Finsch & Hartl.
Orn. Centr.-Polyn. p. 23 (1867); Schleg. Mus. P.-B. Psittaci,
Rerue, p. 59 (1874); Layard, Ibis, 1875, p. 436; id. P. Z. S. 1875,
p. 426, 1876, p. 501; id. Ibis, 1876, pp. 141, 391; Rowley, Orn.
Misc. ii. pl. vii. (1876); Cab. & Polynom Line. Mise, ii. pl. xli. (1876); Cab. & Relinw. Journ. f. Orn. 1876, p. 324; Layard, Ibis, 1878, p. 274; Nehrk. Journ. f. Orn. 1879, p. 394

Nanodes solitarius, Schleg. Mus. P.-B. Psittaci, p. 116 (1864).

Domicella solitaria, Finsch, Papag. ii. p. 760 (1868); id. P. Z. S. 1877, p. 729; Moseley, Not. Chall. pp. 295, 309 (1879); Finsch, Voy. Chall., Birds, p. 42 (1881).
Phigys solitarius, G. R. Gr. Hand-list, ii. p. 154, n. 8198 (1870).

Calliptilus solitarius, Sund. Méth. nat. av. disp. Tent. p. 71 (1872); Salvad, Orn. Pap. e Mol. i. p. 326 (1880).

Trichoglossus solitarius, Gieb. Thes. Orn. iii. p. 659 (1877).

Adult. Pileum, lower abdomen, flanks, and tibiæ very dark purple-blue; back and wings green; the upper feathers of the hind neck very long, light green, like the lower back, the uropygium, the upper and the under tail-coverts; the lower feathers of the hind neek also very long, but red, like the lores, the cheeks, the throat, and the breast; under wing-coverts green, the inner ones red; quills underneath dusky; tail green, the two central tail-feathers have an orange-yellow spot towards the middle of the inner web, the lateral ones have the base of the inner web orange-red; apical part of the tail underneath golden green; bill orange; feet orange

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or red; iris orange. Total length 7.5 inches, wing 5, tail 2.5, bill

0.65, tarsus 0.55.

Young. Has the green and the red feathers of the hind neck much shorter; the occiput is tinged with green; the red feathers of the lower breast are edged more or less with dark purple; there are no yellow-orange spots on the two middle tail-feathers, and the lateral ones have the red marks at the base of the inner web much smaller than in the adult birds.

Hab. Fiji Islands.

a. Ad. sk.	[Moluceas.]	Laugier Coll.
b. ♂ εd. sk.	Fiji.	Purchased.
c, d, e. Ad. sk.	Fiji.	Sir A.B. Gordon [P.].
f, g. o ad. sk.	Ovalau (E. L. Layard).	Tweeddale Coll.
h. ♀ ad. sk.	Ovalau (E. L. Layard).	Tweeddale Coll.
i. d imm. sk.	Ovalau (E. L. Layard).	Tweeddale Coll.
k. ♀ juv. sk.	Ovalau (E. L. Layard).	Tweeddale Coll.
$l, m. \beta \Omega$ ad. sk.	Wakaia (E. L. Layard).	Tweeddale Coll.
n. of ad. sk.	Levuka (E. L. Layard).	Tweeddale Coll.
o. Ad. sk.	Taviuni.	Salvin-Godman Coll.
p. ♂ ad. sk.	Matuka.	'Challenger' Exped.
$q, r. \supseteq ad. sk.$	Matuka.	'Challenger' Exped.
s, t. ♂♀ ad. sk.	Kandavu.	'Challenger' Exped.
u. ♀ juv. sk.	Viti-levu (H.M.S. 'Herald').	The Admiralty [P.].
v. ♀ j̃uv. sk.	Ovalau, July (E. L. Layard).	Purchased.

#### 5. VINI.

Type.

Vini, Less. Illustr. de Zool. pl. xxviii. (1831) . . . . V. kuhli. Brotogeris, Rchnb. (nec Vig.) Syst. Av. t. lxxxii. (1850).

Range. Samoa, Friendly, and Fanning Islands.

# Key to the Species.

a. Forehead green, vertex and occiput bright blue.... australis, p. 43. b. Forchead and vertex green, occiput dark blue .... kuhli, p. 45.

### 1. Vini australis.

Blue-crested Parrakeet, *Lath. Syn.* i. 1, p. 254, n. 58 (1781); id. Gen. Hist. ii. p. 190 (1822).

Psittaeus australis, Gm. S. N. i. p. 329, n. 90 (1788) (ex Latham);

Bechst. Kurze Ueb. p. 80 (1811).

Psittacus fringillaceus, Gm. S. N. i. p. 337, n. 107 (1788) (ex Maerter, Pstitacus iringinaceus, Gm. s. N. 1. p. 337, ll. 107 (1188) (ex Maerter, Phys. Arb. der eintr, Fr. zu Wien, i. 2, p. 47, Taf. i. f. 1, 1784, Südsee); Lath. Ind. Orn. i. p. 112, n. 92 (1760); Bechst. Kurze Ueb. p. 81, pl. 6, f. 2 (1811); Vieill. N. D. xxv. p. 379 (1817); Kuhl, Consp. Psitt. p. 69 (1820); Vieill. Enc. Méth. iii. p. 1409 (1823); Voigt, Cuv. Uebers. p. 748 (1831).
Psittacus popphyreocephalus, Shaw, Nat. Misc. pl. i. (1789).
Psittacus pipilans, Lath. Ind. Orn. i. p. 105, n. 69 (1790); Shaw, Gw. Zed. vii. 2, p. 475, pl. 69 (1811); Vieill. N. D. xxv. p. 375

Gen. Zool, vii. 2, p. 472, pl. 69 (1811); Vieill. N. D. xxv. p. 375 (1817).

Sparrow Parrakeet, Lath. Syn. Suppl. ii, p. 93 (1802); id. Gen. Hist. ii. p. 220 (1822).

La Perruche fringillaire, Levaill. Perr. pl. 71 (1801).

Brotogeris fringillaceus, Steph. Gen. Zool. xiv. p. 133 (1826).

Lorius fringillaceus, Less. Tr. d'Orn. p. 194 (1831). Psittacus euchloris, Forst. MS. (teste Wagl. Mon. Psitt. p. 565); id. Descr. An. p. 160 (1844).

Coriphilus euchloris, Wagl. Mon. Psitt. pp. 495, 564 (1832); Hartl. Wiegm. Archiv, 1852, p. 132; id. Journ. f. Orn. 1854, p. 169.

Brotogeris porphyreocephalus, Sw. Class. B. ii. p. 303 (1836).

Vini fringillaceus, *Less. Compt. de Buff.* 2nd ed., *Ois.* p. 506 (1838). Coriphilus pipilans, *G. R. Gr. Gen. E.* ii. p. 417, n. 3, pl. 103. f. 9 (1845).

Trichoglossus pipilans, Peale, U. St. Expl. Exp. p. 129 (1848), fide

Hartl. Wiegm. Arch. f. Naturg. 1852, p. 106.

Coriphilus fringillaceus, Bp. Rev. et Mag. de Zool. 1854, p. 151, on plants fringinaceus, Bp. Rec. et Mag. de Zoot. 1694, p. 1614, n. 312; Souancé, Rev. et Mag. de Zoot. 1856, p. 226; Bp. Naumannia, 1856, Consp. Psitt. n. 326; G. R. Gr. List Psitt. Brit. Mus. p. 58 (1859); id. Cat. B. Trop. Isl. p. 33 (1859); Schleg. Dierent. p. 79 (1864); Hartl. Ibis, 1864, p. 232; Finsch & Hartl. Orn. Centr.-Polyn. p. 25 (1862); Hartl. & Finsch, P. Z. S. 1811, p. 22 (Tayai, Samon, Heal); Whitney, His. 1875, p. 436; Layard. p. 22 (Tavai, Samoa, Uea); Whitmee, Ibis, 1875, p. 436; Layard, P. Z. S. 1876, p. 491 (Futuria, Vavau), p. 501 (Eova, Vavau, Tonga Tábu);
Garrod, P. Z. S. 1876, p. 692;
Cab. & Rehnw. Journ. f.
Orn. 1876, p. 325 (Samoa, Vavao);
Forbes, P. Z. S. 1879, p. 170 (note);
Moseley, Not. Chall. p. 292 (Tonga) (1879);
Rehnw. I ogelbild. t. xxi. f. 7 (1878-83);
Salv. Cat. B. Strickl. Coll. p. 456 (1882); Blas. Journ. f. Orn. 1884, p. 229; Tristr. Cat. Coll. B. p. 74 (1889).

Coriphilus australis, Cass. U. St. Expl. Exp., Orn. p. 241 (1858);

Rchnw. Journ. f. Orn. 1881, p. 174 (Consp. Psitt. p. 110). Nanodes fringillaceus, Schleg. Mus. P.-B. Psittaci, p. 117 (1864); id.

op. cit., Revue, p. 53 (1874).

Domicella fringillacea, Finsch, Papag. ii. p. 747 (1868); Finsch & Hartl. Journ. f. Orn. 1870, p. 122; Graeffe, ibid. pp. 402, 416; Finsch, Journ. f. Orn. 1872, pp. 32, 33; Finsch, P. Z. S. 1877, pp. 772, 783.

Viui fringillaceus, G. R. Gr. Hand-list, ii. p. 154, n. 8196 (1870). Coriophilus fringillaceus, Sundev. Meth. nat. uv. disp. Tent. p. 71 (1872).

Trichoglossus fringillaceus, Gicb. Thes. Orn. iii. p. 657 (1877).

Adult. Green; forehead green, vertex and occiput with long, narrow, blue feathers; back tinged with olive; lores, cheeks, and throat red; in the middle of the lower breast a red patch, followed by a purple-blue patch in the middle of the abdomen; under tailcoverts green; tibiæ purplish blue in front, green behind; quills underneath dusky; tail-feathers green, the tips and the inner web yellow, underneath greenish yellow, with an orange tinge at the base of the inner web: bill orange-red; feet red (Forster); iris yellow. Total length 7 inches, wing 4.7, tail 2.7, bill 0.5, tarsus 0.49.

Young. The blue feathers on the head are shorter, the red on the throat less extended, the red patch on the lower breast only incipient, and no purple patch on the middle of the abdomen.

Hab. Samoa and Friendly Islands.

α. Ad. st. South Sea Islands. Purchased. b. Ad. sk. South Sea Islands. J. Nightingale, Esq. [P.]. Gould Coll. c, d. Ad. sk. Navigators' Islands. e. Ad. sk. Upolu, Samoa Islands, J. Brenchley, Esq. July 1865. [P.] f. o ad. sk. Upolu, July 1865 (J. Tweeddale Coll. Brenchley). g. Ad. sk. Samoa Islands. Rev. S. J. Whitmee [C.] h. ♀ ad. sk. Samoa Islands (Rev. S. Tweeddale Coll. J. Whitmee). i. Juv. sk. Samoa Islands. Tweeddale Coll. Tweeddale Coll. k. of ad. sk. Friendly Islands. J. Brenchley, Esq. Vavau, Friendly Islands,  $l, m. \beta \neq ad. sk.$ [P.]. July 1865. Savage Island. n, o. Ad. sk. Rev. S. J. Whitmee fC.7. p. Ad. sk. Jardine Coll.

### 2. Vini kuhli.

Psittacula kuhlii, Vig. Zool. Journ. i. p. 412, pl. 16 (1824); Less. Voy. Coq. i. p. 629 (1828); Lewr, Pair. pl. 38 (1832).

Psittacus kuhli, Less. Voy. Coq. i. p. 628 (1828); id. Man. d'Orn. ii.

p. 151 (1828).

q. Sternum with coracoid and scapula.

Lorius kuhlii, Less. Tr. d'Orn. p. 193 (1831); Schleg. Dierent. p. 68 (1864); Gieb. Thes. Orn. ii. p. 501 (1875).

Vini coccinea, Less. Ill. de Zool. pl. xxviii. (1831); id. Compl. de Buff. ix. p. 206, pl. 7 (1837); id. op. cit. 2nd ed. p. 606, n. 1 (1838).

Coriphilus kuhlii, Wagl. Mon. Psitt. pp. 495, 566 (1832); Selb. Nat. Libr. vi. p. 164, pl. 23 (1836); G. R. Gr. Gen. B. ii. p. 417, n. 5 (1845); Hartl. Wiegm. Archiv, 1852, p. 132; id. Journ. f. Orn. 1854, p. 169, Berigt. p. Isiii; Bp. Rev. et Mag. de Zool. 1854, p. 157, n. 311; id. Naumannia, 1856, Consp. Psitt. n. 325; G. R. Gr. List Psitt. Brit. Mus. p. 58 (1859); id. Cat. B. Trop. Isl. p. 32 (1859); Sclat. P. Z. S. 1876, p. 421 (Washington and Fanning Isl.); Streets, Amer. Nat. vi. (1877); Forbes, Ibis, 1877, p. 278 (note); Streets, Bull. U.S. Nat. Mus. n. 7, p. 13 (1877); Rehnw. Vogelbild. t. xxi. f. 5 (1878–83); id. Journ. f. Orn. 1881, p. 174 (Consp. Psitt. p. 110); Tristr. Ibis, 1883, p. 47; id. Cat. Coll. B. p. 74 (1889).

Brotogeris kuhlii, Sw. Class. B. ii. p. 303 (1837).

Psittacula interfringillacea, Bourj. Perr. pl. 83 (1837-38). Domicella kuhli, Finsch, Papag. ii. p. 749 (1868); id. Journ. f. Orn.

1879, p. 330.

Vini kuhlii, G. R. Gray, Hand-list, ii. p. 153, n. 8195 (1870).

Adult. Above green; pileum with long and narrow grass-green feathers; occiput with long and narrow dark blue feathers; interscapular region olive-green; lower back, uropygium, and upper tail-coverts yellowish green; lores, checks, throat, and breast red; middle of the abdomen purple; flanks and under tail-coverts yellowish green; wings green, the primaries edged with blue on the outer webs; quills underneath and greater under wing-coverts

black, smaller under wing-coverts green; tail-feathers green at the tip, dark purple on the outer web, red on the inner one: bill and feet red; iris red, with an inner ring yellow. Total length 7.2 inches, wing 4.8, tail 2.7, bill 0.5, tarsus 0.49. (Tristram Coll.)

Hab. Washington and Fanning Islands.

a. Ad. sk.

[S. Sea Islands.]

Laugier Coll.

#### 6. CORIPHILUS.

Type.

Coriphilus, Wagl. Mon. Psitt. p. 494 (1832)..... C. taitianus. Brotogeris, Sw. (nec Vig.) Class. B. ii. p. 303  $(1837) \dots$ C. taitianns. Coryphilus, Gould, P. Z. S. 1842, p. 165. Corythophilus, Agass. Nomencl. Zool. Ind. Univ. p. 101 (1846). Coriophilus, Sundev. Meth. nat. av. disp. Tent. p. 71 (1872).

Range. Society and Marquesas Islands.

Key to the Species.

a. Dark blue; cheeks, throat, and upper breast white..... taitianus, p. 46. b. Pale blue; cheeks and throat blue, dotted ultramarinus, p. 48. with white .....

# 1. Coriphilus taitianus.

Petit Perruche de l'Isle de Taïti, Daubent. Pl. Enl. 455. f. 2. Psittacus peruvianus, Müll. S. N. Suppl. p. 80 (1776); Cass. Pr. Ac. Nat. Sc. Philad. 1864, p. 241.

L'Arimanon, Buff. Hist. Nat. Ois. vi. p. 175 (1779).

Otahetian Blue Parrakeet, Lath. Syn. i. p. 255 (1781); id. Gen. Hist. ii. p. 189 (1822).

Psittacus cyaneus, Sparrm. Mus. Carl. fasc. ii. pl. 27 (var.) (1782);

Less. Voy. Coq. i. p. 630 (1828).

Psittacus taitianus, Gm. S. N. i. p. 329, n. 91 (1788) (ex. Pl. Enl. 455, f. 2); Lath. Ind. Orn. i. p. 105, n. 70 (1790); Bechst. Kurze Ueb. p. 80 (1811); Vieill. N. D. xxv. p. 341 (1817); Kuhl, Consp. Psitt. p. 68 (1820); Vieill. Enc. Méth. iii. p. 1383, pl. 225, f. 1 (1823); Less. Voy. Coq. i. p. 295 (1826); Voigt, Cuv. Webers. p. 748 (1831).

Psittaeus varius, Gm. S. N. i. p. 337, n. 105 (1788) [ex Maerter, Phys. Arb. der eintr. Fr. zu Wien, i. 2, p. 48, Taf. i. fig. 2 (1784) (Südsee)]; Lath. Ind. Orn. i. p. 112, n. 90 (1790); Bechst. Kurze Ucb. p. 90 (1812); Vieill. N. D. xxv. p. 381 (1817); Kuhl, Consp. Psitt. p. 95 (1820); Vieill. Enc. Méth. iii. p. 1411 (1823). Psittaeus porphyrio, Shaw, Nat. Misc. pl. 7 (1789); id. Gen. Hist. viii. 2, p. 413, pl. 70 (1811).

Psittacus taitianus, var. B, Lath. Ind. Orn. i. p. 105 (1790).

Varied Parrakeet, Lath. Syn. Suppl. ii. p. 93 (1802); id. Gen. Hist. ii. p. 219 (1822).

La Perruche Arimanon, Levaill. Perr. pl. 65 (1801).

La Perruche Sparman, Levaill. Perr. pl. 66 (var.) (1801). Psittacus sparmanni, Bechst. Kurze Ueb. p. 80 (1812); Kuhl, Consp.

Psitt. p. 68 (1820); Voigt, Cuv. Uebers. p. 748 (1831). Otaheite Parrakeet, var. A, Lath. Gen. Hist. ii. p. 189 (1822).

Trichoglossus? taitianus, *Steph. Gen. Zool.* xiv. 2, p. 130 (1826); *Gieb. Thes. Orn.* iii. p. 659 (1877).

Brotogeris sparmanni, Steph. l. c. p. 133 (1826).

Lorius vini, Less. Tr. d'Orn. p. 194 (1831).

Psittacus sapphirinus, Forst. MS.; id. Icon. ined. t. 49 (teste Wagl. Mon. Psitt. p. 563); id. Deser. An. p. 201 (1844).

Coriphilus sapphirinus, Wayl. Mon. Psitt. p. 563 (1832); Hartl. Wiegm. Archiv, 1852, p. 132; id. Journ. f. Orn. 1854, p. 169. Coriphilus cyaneus, Wayl. Mon. Psitt. p. 564 (1832); G. R. Gr. Gen. B. ii. p. 417, n. 2 (1845); Cass. U. St. Expl. Exp., Orn. p. 240

(1858); G. R. Gr. List Psitt. Brit. Mus. p. 57 (1859).

Brotogeris sapphirinus, Sw. Class. B. ii. p. 308 (1837); Hartl. Syst. Verz. Ges. Mus. p. 86 (1844).

Coriphilus notatus (Bodd.) (err.), G. R. Gr. Gen. B. ii. p. 417, n. 1

(1845); Blyth, Cat. B. Mus. A. S. B. p. 13 (1849). Coriphilus taitianus, Bp. Rev. et May. de Zool. 1854, p. 157, n. 315; Souancé, Rev. et May. de Zool. 1856, p. 226; Bp. Naumannia, 1856, Consp. Psitt. n. 329; G. R. Gr. List Psitt. Brit. Mus. p. 57 (1859); id. Cat. B. Trop. Isl. p. 31 (1859); Schleg. Dierent. p. 79 (1864); G. R. Gr. Hand-list, ii. p. 151, n. 8167 (1870); Rehnw. Vogelbild. t. xxi. f. 1 (1878–83); id. Journ. f. Orn. 1881, p. 175 (Consp. Psitt. p. 111); Tristr. Cat. Coll. B. p. 75 (1889).

Nanodes taitianus, Schleg. Mus. P.-B. Psittaci, p. 117 (1864); id. op.

cit., Revue, p. 53 (1874).

Domicella taitiana, Finsch, Papag. ii. p. 742 (1868); Pelz. Ibis, 1873, p. 117.

Coriophilus taitianus, Sund. Meth. nat. av. disp. Tent. p. 71 (1872).

Adult. Dark blue; the feathers of the head rather stiff and pointed; cheeks, fore neek, and upper part of the breast white; quills and tail-feathers underneath black: bill, feet, and iris red. Total length 7.5-8 inches, wing 4.3-4.45, tail 2.7-2.9, bill 0.42,

Young. Has the white feathers of the throat and upper breast edged with dusky.

Hab. Society Islands.

Sparrman (l. c.) has described and figured a bird entirely blue, with no white on the cheeks, face, and neek; I have never seen According to Dr. Finsch, it is the very young bird one like it. of the present species!

a. Ad. sk.	No locality.	Gould Coll.
b. Ad. st.	Huaheine.	Gould Coll.
c. Ad. st.	No locality.	Zoological Society.
d. Ad. st.	Tahiti.	Purchased.
e. Imm. sk.	Tahiti.	Tweeddale Coll.

## 2. Coriphilus ultramarinus.

Pihidi aus Nukahiwa, Krusenst. Voy. pl. 17. f. 2 (1814) (in Russian). Psittacus ultramarinus, Kuhl, Consp. Psitt. p. 49 (1820); Wagl. Mon. Psitt. p. 564 (1832).

Psittaeus saffirinus, part., Wagl. Mon. Psitt. p. 563 (juv.) (1832). Psittaeulus smaragdinus, Hombr. & Jacq. Ann. Sc. Nat. xvi. p. 318 (1841).

Coryphilus dryas, Gould, P. Z. S. 1842, p. 165; id. Voy. of Sulph. p. 44, pl. 26 (1844); G. R. Gr. Gen. B. ii. p. 417, n. 6 (1845); Hartl. Wiegm. Archiv, 1852, p. 133; id. Journ. f. Orn. 1854, p. 170; Bp. Rev. et Mag. de Zool. 1854, p. 157, n. 314; id. Compt. Rend. xli. p. 1111 (1855).

Psittacula lessoni, Less. Echo du Monde Sav. 1843, p. 944.

Corvphilus goupilii, Hombr. & Jacq. Voy. Pôle Sud, pl. 24 bis. f. 3 (1846); Jacq. et Pucher. Voy. Pôle Sud, iii. p. 103 (1853); Hartl. Journ. f. Orn. 1854, p. 165; Souancé, Rev. et Mag. de Zool. 1856, p. 226; Bp. Naumannia, 1856, Consp. Psitt. n. 328.

Psittacula smaragdinis, G. R. Gr. Gen. B. ii. p. 323, n. 20 (1846). Vini dryas, Less. Descr. des Mamm. et des Ois. p. 191 (1847).

Coriphilus smaragdinus, G. R. Gr. List. Psitt. Brit. Mus. p. 57 (1859);
id. Cat. B. Trop. Ist. p. 32 (1859); Schley. Dierent. p. 79 (1864);
Finsch, P. Z. S. 1877, p. 407; Rehnw. Vogelbild. t. xxi. f. 2 (1878–83);
id. Journ. f. Orn. 1881, p. 176 (Consp. Psitt. p. 112); Tristr. Ibis, 1881, p. 249;
Blas. P. Z. S. 1882, p. 702.

Nanodes smaragdinus, Schleg. Mus. P.-B. Psittaci, p. 217 (1864); id.

op. cit. Revue, p. 54 (1874).

Domicella smaragdina, Finsch, Papag. ii. p. 745 (1868).

Coriphilus smaragdinis, G. R. Gr. Hand-list, ii. p. 151, n. 8168 (1870); Tristr. Cat. Coll. B. p. 74 (1889).
Trichoglossus smaragdinus, Gieb. Thes. Orn. iii. p. 659 (1877).

Coriphilus ultramarinus, Salvin, Cat. B. Strickl. Coll. p. 456 (1882).

Adult. Upper parts light blue, uropygium and upper tail-coverts paler, forehead brighter; vertex and occiput deep blue; the feathers of the pileum long, pointed, and with brighter shaft-streaks; cheeks and front of the neck deep blue, each feather with a whitish spot at the tip; breast covered by a band of deep blue; abdomen blue, each feather largely tipped with whitish; middle of the lower abdomen and thighs deep blue; under tail-coverts pale blue; quills black, with the outer webs blue; tail whitish blue, the inner web of the feathers white, edged with blue at the tip: bill black, except at the base of the upper mandible, which appears light horn-colour; feet dark yellowish; iris dark. Total length 7 inches, wing 4.6, tail 2.9, bill 0.45, tarsus 0.49.

Young. Much duller than the adult; the blue colour is more greenish; there are no whitish spots on the cheeks, throat, and

abdomen.

Hab. Marquesas Islands.

a. Ad. st.	Marquesas 1sl. (Voy. of H.M.S.	J. Gould, Esq. [P.].
	'Sulphur'). (Type of Co	ryphilus dryas, Gould.)
b. Ad. sk.	No locality.	Gould Coll.
c. Ad. sk.	Marquesas Isl.	Purchased.
d. Ad. sk.	Marquesas Isl. (Rev. J. Green).	Tweeddale Coll.
e. Juv. st.	Noukaiya.	Purchased.

#### 7. TRICHOGLOSSUS.

Type.

Trichoglossus, Vig. & Horsf. Trans. Linn. T. hæmatodes. T. novæ hollandiæ.

Range. Australia, Timor group, Celebes, Amboyna group, Papuan Islands, New Hebrides, and New Caledonia.

### Key to the Species.

I. Quills underneath with a coloured band towards the base.

a. Band towards the base of the quills underneath vellow.

a'. Band on the nape greenish yellow. a''. Middle of the abdomen not blue. a"". Breast mostly yellow; occiput

bright green..... b'". Breast red.

a4. Head not entirely blue.

a<sup>5</sup>. Breast-feathers red, with no tinge of yellow towards the edges.

a6. No dark cross bands on the breast b6. Breast with dark cross bands.

 $a^7$ . Dark cross bands on the breast much broader and very conspicuous .....

b7. Dark cross bands on the breast much narrower. a<sup>8</sup>. Upper parts grass-green. b<sup>8</sup>. Upper parts olive-green. flavicans, p. 55.

b. Breast-feathers red, slightly tinged with yellow towards the edges.

c6. Larger: wing 6 inches; forehead and cheeks blue ....

d<sup>6</sup>. Smaller: wing 5.2 inches; very little blue on the forehead and cheeks ....

b4. Head entirely blue ...... b". Middle of the abdomen blue; head entirely blue .....

b'. Band on the nape orange ...... b. Band towards the base of the quills underneath red .....

II. Quills with no coloured band beneath; cheeks and breast red .....

hæmatodes, p. 49.

forsteni, p. 51.

cyanogrammus, p. 51.

massena, p. 53.

nigrogularis, p. 55

mitchelli, p. 57. cæruleiceps, p. 57.

novæ hollandiæ, p. 57. rubritorques, p. 60.

rosenbergi, p. 61.

ornatus, p. 61.

## Trichoglossus hæmatodes.

The Red-breasted Parrakeet, Edw. Glean. v. pl. 232 (1758). Psittacus hæmatodus, *Linn. Mant. Plant.* p. 524 (part.) (1771); *Lath. Ind. Orn.* i. p. 87, n. 17 (syn. emend. et excl. var.) (1790); *Shaw, Nat. Misc.* pl. 917 (1809?) (ex Edw.); Vieill. Enc. Méth. 50

iii. p. 1386 (young male) (1823); Hahn, Orn. Atl., Papag. p. 81 (syn. emend.), t. 61 (1836).

Psittacus hæmatotus, part., Gm. S. N. i. p. 316, n. 50 (1788) (syn. emend.).

La Perruche à face bleue, Levaill. Perr. pl 47 (1801).

Psittacus hæmatodes, Shaw, Gen. Zool. viii. 2, p. 415 (1811) (syn. emend.).

Psittacus' capistratus, Bechst., Lath. Ueb. p. 68, pl. 3 (1811); Kuhl, Mon. Psitt. p. 35 (1820); Voigt, Cuv. Uebers. p. 734 (1831); Müll. & Schleg. Verh. Land- en Volkenk. p. 108 (1839–1844); Weinl. Jown. f. Orn. 1854, Ber. p. lxxv.

Red-breasted Parrot, Lath. Gen. Hist. ii. p. 122 (excl. syn.) (1822). Trichoglossus capistratus, Vig. et Horsf. Trans. Linn. Soc. xv. p. 290 (1826); Steph. Gen. Zool. xiv. 2, p. 130 (partim) (1826); Bolle, Journ. f. Orn. 1856, p. 170; Schleg. Mus. P.-B. Psittaci, p. 109 (syn. emend.) (1864); G. R. Gr. Hand-list, ii. p. 155, n. 8219 (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 48 (1874); ? Gulliv. P. Z. S. 1875, p. 489.

Trichoglossus hæmatodus, Wagl. Mon. Psitt. p. 350 (1832); G. R. Gr. Gen. B. ii. p. 411, n. 1 (1846); Bp. Consp. i. p. 3 (1850); id. Rev. et Mag. de Zool. 1854, p. 157, n. 295; id. Naumannia, 1856, Consp. Psitt. n. 309; ? Blyth, Journ. A. S. B. xxvii. p. 279 (1858); G. R. Gr. List Psitt. Brit. Mus. p. 60 (1859); id. P. Z. S. 1860, p. 357; Wall. Ibis, 1861, p. 350; Rosenb. Nat. Tijdschr. Ned. Ind. xxv. pp. 145, 147 (1862); id. Journ. f. Orn. 1863, pp. 66, 67; Wall. P. Z. S. 1863, p. 484, 1864, pp. 291, 295; Finsch, Neu-Guin. p. 158 (1865); G. R. Gr. Hand-list, ii. p. 155, n. 8209 (1870).

Psittacus (Trichoglossus) capistratus, Müll. & Schleg. Verh. Land-

en Volkenk. p. 107 (1839–1844).

Trichoglossus hæmatodes, Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); Nitzsch, Pterylogr. (Engl. ed.), p. 100 (1867); Finsch, Papag. ii. p. 827 (1868); Gieb. Thes. Orn. iii. p. 657 (1877); ? Forbes, P. Z. S. 1879, p. 170 (note); Rchnw. Vogelbild. t. viii. f. 6 (1878– 83); id. Journ. f. Orn. 1881, p. 162 (Consp. Psitt. p. 98); Meyer, Verh. z.-b. Gesell. Wien, 1881, p. 762 (Sumba); Solat. List Vert. An. 8th ed. p. 319 (1883).

Trichoglossus cyanogrammus, Sclat. (nec Wagl.), P. Z. S. 1860.

p. 226; Finsch (nec Wagl.), Ned. Tijdschr. Dierk. i. Berigt. p. xviii (1863); Schleg. Dierent. p. 77 (1864). Trichoglossus hamatopus, Cab. & Rehnw. Journ. f. Orn. 1876, p. 324.

Adult. Back, wings, and tail green; forehead, cheeks, and chin blue; occiput, ear-coverts, and throat green; a greenish-yellow band on the nape; the interscapular feathers have concealed vellow spots, in some specimens tinged with red; breast yellow, more or less tinged with orange, the feathers with vanishing green edges; middle of the abdomen dark green; flanks yellow, more or less tinged with red: lower abdomen, thighs, and under tail-coverts greenish yellow, spotted with green; under wing-coverts yellow, tinged with red; quills beneath dusky, with a yellow band; tail beneath oily yellow; inner web of the lateral tail-feathers yellow; bill red; feet dark grey; iris yellow or red. Total length 11 inches, wing 4.90, tail 4.40, bill 0.80, tarsus 0.55.

Hab. Timor.

a, b. Ad. st. c. Ad. st. d. Ad. sk.

e. Ad. sk.

No locality. No exact locality. No locality. Timor Delli, April 1861.

Purchased. Zoological Society. Gould Coll. Wallace Coll.

### 2. Trichoglossus forsteni.

Psittacus forsteni, Temm. in Mus. Lugd.

Psittacus forsteni, Temm. in Mus. Lugd.
Trichoglossus forsteni, Bp. Consp. i. p. 3 (1850) (Sumbawa); id. Compt. Rend. xxx. p. 134 (1850); id. Rev. et Mag. de Zool. 1854, p. 157, no. 296; id. Naumannia, 1856, Consp. Psitt. no. 310; G. R. Gr. List Psitt. Brit. Mus. p. 60 (1859); Sclat. P. Z. S. 1860, p. 226; Wall. P. Z. S. 1863, p. 484, 1864, pp. 291, 295; Schleg. Dierent. p. 77 (with figure) (1864); id. Mus. P.-B. Psittaci, p. 111 (1864); Finsch, Neu-Guin. p. 158 (1865); id. Papag. ii, p. 826 (1868); G. R. Gr. Hand-list, ii. p. 156, no. 8220 (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 46 (1874); Gieb. Thes. Orn. iii. p. 657 (1877); Rehnw. Journ. f. Orn. 1881, p. 157 (Consp. Psitt. p. 93) (partim); id. Vogelbild. Nachtr. Bericht. (part.) (1883); Guillem. P. Z. S. 1885, p. 502 (Bima, Sumbawa).
Trichoglossus immarginatus. Bluth. Journ. A. S. B. xxvii. p. 279

Trichoglossus immarginatus, Blyth, Journ. A. S. B. xxvii. p. 279

(1858); G. R. Gr. P. Z. S. 1861, p. 436. Psittacus (Trichoglossus) forsteni, Rosenb. Journ. f. Orn. 1862, p. 66; id. Nat. Tijdschr. Ned. Ind. xxv. p. 146 (1863).

Adult male. Back, wings, and tail green; head purple-brown, front and lores slightly tinged with blue, vertex with a faint tinge of green; a greenish-yellow band on the nape; the interscapular feathers have concealed red spots, and are edged with brown-purple; throat and middle of the abdomen dark purple; breast pure bright red, with no dark cross bands; flanks, vent, and under tail-coverts yellow, with the feathers broadly tipped with green; under wing-coverts red; the quills beneath dusky black with a yellow oblique band; tail-feathers underneath oily, with a very narrow yellow edge on the inner web: "bill red, yellow at tip; feet olive-green" (Guillemard). Total length about 10 inches, wing 5.3, tail 4.2, bill 0.8, tarsus 0.61 (Rothschild Coll.).

Hab. Sumbawa.

I have described an adult male, collected by Dr. Guillemard, now in the collection of Mr. Walter Rothschild. T. forsteni appears to me to be quite different from T. mitchelli, with which it has been associated by Dr. Reichenow. T. forsteni is a larger bird, with a stronger and larger bill, has the head more decidedly purple, and no green colour on the throat, which is purple; the breast pure red, with no yellow tinge towards the edges of the feathers; the middle of the abdomen is brownish-purple, with no green whatever. I cannot understand what considerations have induced Dr. Reichenow to unite T. forsteni and T. mitchelli in one species.

## 3. Trichoglossus cyanogrammus.

Psittaca Amboinensis varia, Briss. Orn. iv. p. 364 (1760). Perruche d'Amboina, Daubent. Pl. Enl. 61 (fig. bona). La Perruche à face bleue, Buff. Hist. Nat. Ois. vi. p. 150 (1779). Red-breasted Parrot, Lath. Syn. i. p. 212 (sine var.) (1781).

Psittacus hæmatodus, Bodd. (nec Linn.), Tabl. Pl. Enl. p. 4 (ex Pl. Enl. 61) (1783); Gm. S. N. i. p. 316, n. 50 (syn. emend.) (1788); Lath. Ind. Orn. i. p. 87, n. 17 (sine var.) (1790); Vieill. Enc. Méth. p. 1386 (9?) (1823); Temm. Tabl. Méth. p. 60 (partim) (1839).

La Perruche à tête bleue (♀), Levaill. Perr. pl. 25 (fig. bona) et

pl. 27 (var.) (1801).

Psittacus hæmatopus (!) (av. jun.), Kuhl, Consp. Psitt. p. 35 (1820). Australasia novæ-hollandiæ (\(\Q\)), Less. (nec Gm.), Tr. d'Orn. p. 210

(1831).

Trichoglossus cyanogrammus, Wagl. Mon. Psitt. p. 554 (1832) (ex Brisson); G. R. Gr. Gen. B. ii. p. 411, n. 4 (1846); Bp. Rev. et Mag. de Zool. 1854, p. 157, sp. 297; id. Naumannia, 1856, Consp. Psitt. sp. 312; Sclat. P. Z. S. 1858, p. 164, n. 104; G. R. Gr. Cat. B. New Guin. pp. 41, 59 (1859); id. List Psitt. Brit. Mus. Cat. B. New Guin. pp. 41, 55 (1835); id. List Fsitt. Bid. Hus. p. 61 (1859); id. P. Z. S. 1860, p. 357, 1861, p. 436; Rosenb. Nat. Tijdschr. Ned. Ind. xxv. p. 224, n. 6 (1863); id. Journ. f. Orn. 1864, p. 112, n. 6; Wall. P. Z. S. 1863, p. 20, 1864, pp. 291, 295; Finsch, Neu-Guin. p. 158 (1865); id. Papag. ii. p. 830 (partim) (1868); G. R. Gr. Hand-list, ii. p. 155, sp. 8213 (187). Meyer, Sitz. k. Ak. Wissensch. Wien, lxx. p. 225 (1874); Sclat. P. Z. S. 1873, p. 697; Meyer, Sitzb. Isis Dresd. 1875, p. 78; Salvad. Ann. Mus. Civ. Gen. vii. p. 760 (1875), viii. p. 371 (1876), x. p. 35, n. 77, p. 112 (1877); Lenz, Journ. f. Orn. 1877, p. 364; Selat. P. Z. S. 1878, p. 579 (Humboldt Bay); D'Alb. p. 504; Scala. F. Z. S. 1878, p. 513 (Humbold Bay); D Hav. § Salvad. Ann. Mus. Civ. Gen. xiv. p. 40 (1879); Salvad. Orn. Pap. e Mol. i. p. 279 (1880); Rchuw. Fogelbild. t. viii, f. 1 (1878– 83); id. Journ. f. Orn. 1881, p. 158 (Consp. Psitt. p. 94); Blas. u. Nehrk. Verh. z.-b. Gesellsch. Wien, 1882, p. 477; Sclat. List Vert. An. 8th ed. p. 319 (1883); Nehrk. Journ. f. Orn. 1885, p. 31; Guillem. P. Z. S. 1885, p. 622; Meyer, Zeitschr. f. ges. Orn. 1886, p. 33 (Kafu); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 172 (1889); Tristr. Cat. Coll. B. p. 74 (1889).

Trichoglossus hæmatodus, Jard. & Selb. (nec Linn.), Ill. Orn. iii.

pl. 111 (1825-39); Sclat. P. Z. S. 1860, p. 226.

Psittacus capistratus, var., Müll. Verh. Land- en Volkenk. pp. 107,

108 (1839-44).

? Psittacus hæmatodus, Weinl. Journ. f. Orn. 1854, Bericht, p. lxxv. Trichoglossus capistratus, var., G. R. Gr. P. Z. S. 1858, p. 194, 1861, p. 436.

Trichoglossus nigrogularis, var., G. R. Gr. P. Z. S. 1859, p. 159

(ex Dorei).

Trichoglossus nigrogularis, G. R. Gr. P. Z. S. 1861, p. 436 (partim) (nec 1858); Rosenb. Journ. f. Orn. 1862, pp. 63, 64, 67; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 143, 144, et 223 (partim) (nec p. 144) (1863); id. Journ. f. Orn. 1864, p. 112, n. 5 (partim); Bernst. (nec G. R. Gr.), Nat. Tijdschr. Ned. Ind. xxvii. p. 297 (1864); id. Dagboek, pp. 116, 123, 143, 146, 151, 154 (1883).

Trichoglossus capistratus, Rosenb. Journ. f. Orn. 1862, pp. 60, 61, 66,

67; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 140, 141 (1863). Trichoglossus hæmatotus, Schleg. Mus. P.-B. Psittaci, p. 109 (1864); id. Ned. Tijdschr. Dierk. iii. p. 336 (1866), iv. p. 10 (1871); id. Mus. P.-B. Psittaci, Revue, p. 43 (partim) (1874); Rosenb. Reist. naar Geelvinkb. pp. 36 (Mafor!), 56, 83, 113 (1875).

Adult. Back, wings, and tail green; forehead and cheeks blue; vertex greenish; occiput, ear-coverts, and throat purple-black; a yellowish-green band on the nape, the feathers of this band have a concealed red band in the middle; the interscapular feathers have each a concealed red band; lower throat and upper breast bright red, with purple-black cross bands at the edges of the feathers; middle of the abdomen green; lower abdomen and flanks yellow, with green cross bands; under tail-coverts yellow, with green tips; sides of the breast red, with the feathers edged with green; flanks and under wing-coverts red; quills beneath dusky, with a very broad yellow band at the base; on the inner secondaries the yellow band is stained with red; tail underneath olive, inner web of the tail-feathers yellow: bill orange-red; feet lead-colour; iris red. Total length from 12-10-60 inches, wing 5.70-5.20, tail 5.30-4.70, bill 0.95-0.85, tarsus 0.68-0.66.

Young. Has the occiput greenish; the interscapular feathers green without the concealed red spots, the red of the breast paler; the feathers of the breast with a narrow yellowish line before the

green edge.

Hab. The Amboyna group and Western Papua—Amboyna, Ceram, Bouru, Goram, Westeru New Guinea, eastwards as far as the upper part of the Fly River, Mysol, Salwatty, Batanta, Waigiou, Miosnom,

and Jobi.

a. Ad. st. Amboyna. Massena Coll. Amboyna (A. R. Wallace). Gould Coll. b. Ad. sk. c. Ad. sk. Amboyna (Hoedt). Leyden Museum. d. Ad. sk. Ceram (A. R. Wallace). Tweeddale Coll. e. ♀ ad. sk. f. Ad. sk. A. R. Wallace [C.]. Bouru. Bouru (A. R. Wallace). Salvin-Godman Coll. A. R. Wallace [C.]. g. Ad. sk. h. Ad. sk. Goram (A. R. Wallace). Tweeddale Coll. Dorey. i. Ad. sk. A. R. Wallace [C.]. k. Ad. sk. New Guinea. l. Ad. sk. New Guinea. Tweeddale Coll. m. Q ad. sk. Humboldt Bay. 'Challenger' Exped. n, o. ad. et ad. sk. L. Laglaize [C.] Amberbaki, May. A. R. Wallace [C.]. p. Ad. sk. Waigiou. *q-t*. Ad. sk. u. Juv. sk. A. R. Wallace [C.]. Mysol. v. Ad. var. st. Moluccas. Purchased. w. Skeleton. New Guinea.

## 4. Trichoglossus massena.

Trichoglossus massena, Bp. Rev. et Mag. de Zool. 1854, p. 157 (type examined); id. Naumannia, 1856, Consp. Psitt. sp. 313; G. R. Gr. List Psitt. Brit. Mus. p. 61 (1859); id. Cat. B. Trop. Isl. p. 33 (1859); Sclat. P. Z. S. 1860, p. 228; Wall. P. Z. S. 1864, pp. 292, 295; Schleg. Mus. P.-B. Psittaci, p. 110 (1864); Finsch, Papag. ii. p. 834 (1868); Sclat. P. Z. S. 1869, pp. 119, 123, 124; G. R. Gr. Hand-list, ii. p. 155, sp. 8214 (1870); id. Ann. § Mag. N. H. (4) v. p. 330 (1870); id. Cruise of Curaçoa, Birds, p. 382, pl. 15 (1873); Salvad. § D'Alb. Ann. Mus. Civ. Gen. vii. p. 813 (1875); Tristr. Ibis, 1876, p. 263; Salvad. Ann. Mus. Civ. Gen. ix. p. 16 (1876), x. p. 36, n. 78 (1877); Sclat. P. Z. S. 1877, p. 108;

Sharpe, Journ. Linn. Soc. Zool. xiii. pp. 80, 309 (1877), p. 491, sp. 13 (1878), xiv. p. 586 (1879); Layard, Ibis, 1878, pp. 253, 274, 280; Ramsay, Proc. Linn. Soc. N. S. W. iii. p. 255 (1878), iv. 214, 250, 14msag, 170c. Idea. Soc. 18, S. W. III. B. 250 (1878), N. p. 96 (1879); Tristr. Ibis, 1879, pp. 185, 191, 442; Sclat. P. Z. S. 1879, p. 447; Salvad. Orn. Pap. e Mol. i. p. 288 (1880); Layard, Ibis, 1880, pp. 230 (Lifu), 300, 307; Rehnw. Vogelbild. t. viii. f. 2 (1878–83); id. Journ. f. Orn. 1881, p. 157 (Consp. Psitt. p. 93); Finsch, Ibis, 1881, p. 538; Ramsay, Pr. Linn. Soc. N. S. W. vii. p. 34 (1882) (Solomon Islands); Tristr. Ibis, 1882, p. 143; Layard, P. Z. S. 1882, p. 408 (Lifu); Sharpe, Journ. Linn. Soc., Zool. xvi. p. 426 (1882); Finsch, Vög. d. Südsee, p. 18 (New Britain, Laloki) (1884); Finsch u. Meyer, Zeitschr. f. ges. Orn. 1886, p. 9 (Horseshoe Mountains); Schal. Journ. f. Orn. 1887, p. 246 (New Caledonia); Grant, P. Z. S. 1887, p. 330 1888, pp. 187, 191, Pale u. Lev. Lev. App. d. art. v. b. 1887, p. 330, 1888, pp. 187, 191; Pelz. v. Lor. Ann. d. naturh. Hofmus. 1888, p. 39 (typical specimen of T. deplanchei); Tristr. Cat. Coll. B. p. 74 (1889); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 172 (1889); Meyer, Ibis, 1890, p. 413.

Trichoglossus hæmatotus, part., Schleg. Mus. P.-B. Psittaci, Revue,

p. 43 (1874).

Trichoglossus deplanchei, Verr. & Des Murs, Rev. et May. de Zool. 1860, p. 388 (New Caledonia); Marie, Act. Soc. Linn, Bord. xxvii. p. 327 (1870); This, 1877, p. 362; Oust. Bull. Soc. Philom. Paris, 1878, p. 218.

Adult. Very much like T. cyanogrammus, but generally smaller, or at least with a shorter tail; the red on the breast generally paler; the principal and more constant differences are the much narrower dark cross bands on the breast, and the slight tinge of green on the ear-coverts and cheeks. Total length 10 inches, wing 5.5, tail 4.10, bill 0.85, tarsus 0.61.

Hab. S.E. New Guinea, Duke of York Islands, New Ireland, New Britain, Solomon Islands, New Hebrides, New Caledonia, and

Loyalty Islands.

I cannot find that the New Caledonia specimens differ in any way from those of the other legalities mentioned above

way from those e	of the other localities mentione	a above.
a. Ad. sk.	Port Moresby.	Rev. S. Macfarlane
b. Ad. sk.	S.E. New Guinea.	Tweeddale Coll.
c. Ad. sk.	S.E. New Guinea, Jan. 1876.	Tweeddale Coll.
d. Ad. sk.	S.E. New Guinea, Feb. 1876.	Tweeddale Coll.
e, f. Ad. sk.	Astrolabe Mountains.	Hon. H. Romilly [C.].
g. 3 ad. sk.	New Britain, August (G. E. Richards).	Purchased.
h. Ad. sk.	New Britain.	Purchased.
i. Ad. sk.	New Ireland (Rev. G. Brown).	Tweeddale Coll.
k. Juv. sk.	New Ireland.	Rev. G. Brown [C.].
l. & ad. sk.	San Cristoval, Solomon Isl.	Cuming Coll.
$m, n, \beta; o, \varphi$	San Cristoval, Jan. 8, 1855	Gould Coll.
ad. sk.	(Voyage of H.M.S. 'Herald.')	0.0101
p. ♀ ad. sk.	San Cristoval, Sept. 1865.	J. Brenchley, Esq. [P.].
q. Juv. sk.	Solomon Islands.	P. L. Sclater, Esq. [P.].
r. ♂ ad. sk.	Port Resolution, Tanna, New Hebrides, July (G. E. Richards).	Purchased.

 $s, t. \not \subseteq ad. sk.$ Erromango, New Hebrides, Purchased. Sept. 10, 1858. Havannah Harbour, Vati, u, v. ♀ ad. et ♂ Purchased. juv. sk. New Hebrides, June, Nov. (G. E. Richards). w. Juv. sk. J. Brenchley, Esq. Vanua-Lava, Banks Group, Aug. 1865. [P.]. New Caledonia (E. L. Layard). x. Q ad. sk. Seebohm Coll. y. Imm. sk. New Caledonia. Maison Verreaux. z. ♀ juv. sk. a'. Juv. sk. New Caledonia (Verreaux). Tweeddale Coll. New Caledonia (E. L. Layard). Purchased.

#### 5. Trichoglossus flavicans.

Trichoglossus massenæ, Hartl. (nec Bp.), P. Z. S. 1867, p. 828

(Echiquier Isl.).

Trichoglossus flavicans, Cab. & Rehnw. Sitzb. Gesellsch. naturf. Freunde zu Berl. p. 73 (1876) (type examined); iid. Journ. f. Orn. 1876, p. 324; Salvad. Ann. Mus. Civ. Gen. x. p. 35, n. 79 (1877); Cab. Journ. f. Orn. 1877, t. v. f. 1; Salvad. Orn. Pap. e Mol. i. p. 290 (1880); Rehnw. Journ. f. Orn. 1881, p. 158 (Consp. Psitt. p. 94); id. Vogelbild. Nachtr. 35 (1883); Sulvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 172 (1889); Stüder, Forschungsreise Gazelle, p. 237, t. x. f. 1 (1889).

Trichoglossus cyanogrammus, Sclat. (nec Wayl.), P. Z. S. 1877, p. 544, sp. 9 (Admiralty Isl.); Sclat. Voy. Chall., Birds, p. 30 (1881).

Adult. Very much like T. cyanogrammus and T. massena, but the green colour of the upper parts has a decidedly olive tinge; the dark purple colour of the occiput, sides of the head, and throat more conspicuous; the red of the breast is very bright, but not so dark; the black bands across the breast are very narrow, as in T. massena; the green on the middle of the abdomen is more or less tinged with dark purple. Total length 10 inches, wing 6, tail 4·1, bill 0·95, tarsus 0·65.

Hab. New Hanover, Admiralty Islands, Echiquier Islands.

a-e. ♂; f. ♀ ad. sk. Admiralty Islands. 'Challenger' Expedition. g. ♀ ad. sk. [New Ireland.\*] 'Challenger' Expedition. Dr. O. Finsch [C.].

## 6. Trichoglossus nigrogularis.

Trichoglossus nigrogularis, G. R. Gr. P. Z. S. 1858, pp. 183, 195; id. Cut. B. New Guin. pp. 41, 60 (1859); id. List Psitt. Brit. Mus. p. 61 (1859); Sclat. P. Z. S. 1860, p. 227; G. R. Gr. P. Z. S. 1861, p. 436 (partim); Rosenb. Journ. f. Orn. 1862, p. 65, 1864, p. 112, sp. 5 (partim); Schleg. Dierent. p. 77 (1864); id. Mus. P.-B. Psittaci, p. 110 (1864); Finsch, Neu-Guin. p. 158 (1865); Rosenb. Reis naar de Zuidoostereil. pp. 48, 80, 100 (1867); G. R. Gr. Hand-list, ii. p. 155, sp. 8212 (1870); Sclat. P. Z. S. 1873, p. 697; Salvad. Ann. Mus. Civ. Gen. x. p. 35, n. 80 (1877); id. P. Z. S. 1878, p. 93; D'Alb. & Salvad. Ann. Mus. Civ.

<sup>\*</sup> I greatly doubt whether Dr. Finsch's specimen is really from New Ireland, where T. massena is certainly found.

Gen. xiv. p. 40 (1879) (Fly River); Salvad. Orn. Pap. e Mol. i. p. 292 (1880); id. Voy. Chall., Birds, p. 75, pl. xx. (1881); Rchnw. Journ. f. Orn. 1881, pp. 159, 396 (Consp. Psitt. pp. 95, 228); id. Vogelbild. Nachtr. 36 (1883); Meyer, Zeitschr. f. ges. Orn. i. p. 274 (1884); Guillem. P. Z. S. 1885, p. 623; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 172 (1889).

Trichoglossus cyanogrammus, part., Wall. P. Z. S. 1861, p. 291;

Finsch, Papag. ii. p. 830 (partim) (1868).

Trichoglossus hæmatotus, part., Schleg. Ned. Tijdschr. Dierk. iii. p. 336 (partim) (1866), iv. p. 10 (1871); id. Mus. P.-B. Psittaci, Revue, p. 43 (partim) (1874).\*

Adult. Very much like T. cyanogrammus, but the head has only two colours, blue on the forehead and cheeks, green on the vertex and occiput; there is scarcely any or no dark purple tinge on the occiput; throat purple; the red colour of the breast is paler than in T. cyanogrammus, and the breast-feathers have an orange tinge near the dark edges; the dark bands on the edges of the breastfeathers are narrower than in T. cyanogrammus; the middle of the abdomen is more or less mixed with black. Total length 11 inches, wing 6, tail 5.50, bill 0.90, tarsus 0.65.

Hab. Aru Islands, Southern New Guinea, along the middle part

of the Fly River, and Ke Islands.

a, b. of \( \rightarrow \) ad. sk.

Aru Islands.

Wallace Coll. (Types of species.)

#### TRICHOGLOSSUS COCCINEIFRONS, G. R. Gr.

Trichoglossus coccineirons, G. R. Gr. P. Z. S. 1858, pp. 183, 194; id. Cat. B. New Guin. pp. 41, 60 (1859); id. List Psitt. Brit. Mus. p. 62 (1859); Sclat. P. Z. S. 1860, p. 227.; G. R. Gr. P. Z. S. 1861, p. 436; Rosenb. Journ. f. Orn. 1862, pp. 65, 67, 1864, p. 112, n. 7; Wall. P. Z. S. 1864, pp. 291, 295; Finsch, Neu-Guin. p. 158 (1865); Rosenb. Reis naar de Zuidoostereil. p. 48 (1867); Schleg. Ned. Tijdschr. Dierk. iii. p. 336 (1866); Finsch, Papag. ii. p. 845 (1868); G. R. Gr. Hand-list, ii. p. 156, sp. 8222 (1870); Schleg. Ned. Tidjschr. Dierk. iv. p. 10 (1871); Meyer, Sitzb. k. Akad. Wissensch. Wien, lxx. pp. 226, 227 (1874); Salvad. Ann. Mus. Civ. Gen. x. p. 35, n. 81 (1877); id. Orn. Pap. e Mol. i. p. 296 (1880); Rchnw. Journ. f. Orn. 1881, p. 160 (Consp. Psitt. p. 96); id. Vogelbild. Nachtr. 37 (1883); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 172 (1889).

Male. Green; head purple; forehead and some scattered feathers on the pileum red; a red collar round the hind neck; breast red, with purple cross bands; abdomen blue; flanks green and yellow; thighs green; under tail-coverts bands; abdomen blue; flanks green and yellow; thighs green; under tail-coverts orange, green in the middle; smaller upper wing-coverts with orange-red irregular spots and edges; under wing-coverts red; inner webs of the quills towards the base orange-red; tail-feathers green, the lateral ones with the inner webs golden red towards the bases; bill orange; feet plumbeous. Total length about 11 inches, wing 6, tail 4·3, bill 0·85, tarsus 0·6.

Hab. Aru Islands.

a. 3 ad. sk. Aru Islands. A. R. Wallace [C.]. (Type of Trichoglossus coccineifrons, Gr.)

<sup>\*</sup> The following refers to a bird which was collected by Wallace in the Arn Islands, and which most likely is a hybrid between T. nigrogularis and Chalcopsittacus scintillatus.

Wallace Coll.  $c. \ \ 2 \ ad. \ sk.$ Aru Islands. d. ♀ ad. sk. Gould Coll. Aru Islands (A. R. Wallace).

'Challenger' Expedition. e. d ad. sk. Aru Islands. Aru Islands (J. T. Cock-Salvin-Godman Coll. f, g. Ad. sk.

erell).

### 7. Trichoglossus mitchelli.

Trichoglossus mitchellii, G. R. Gr. List Psitt. Brit. Mus. p. 62 (1859); Finsch, Papag. ii. p. 838 (1868); Sclat. P. Z. S. 1871, p. 499, pl. xli.; G. R. Gr. ibid.; Sclat. op. cit. p. 544; Salv. Ibis, 1871, p. 372; Sclat. P. Z. S. 1880, p. 420; id. List Vert. An. 8th ed. p. 320 (1883).

Psittacus (Trichoglossus) forsteni, Rosenb. Journ. f. Orn. 1862, p. 66; id. Naturk. Tijdschr. Ned. Ind. xxv. p. 146 (1863).

Adult female. Back, wings, and tail green; head purple-brown; front and lores scarcely tinged with blue; vertex and cheeks with a faint tinge of green; a yellow-green band across the nape; the interscapular feathers have concealed red spots; a green band on the throat; breast bright red, with a faint tinge of orange towards the tip of the feathers, which are more or less faintly edged with green; abdomen green, tinged with dark brown-purple; vent and under tail-coverts green, with the feathers yellow at the base; thighs yellow; under wing-coverts red; quills beneath dusky black with a yellow band; tail underneath oily, with the inner web of the tail-feathers edged with yellow: bill red; feet dark grey; iris red. Total length 9 inches, wing 5.2, tail 3.5, bill 0.7, tarsus 0.51.

A second specimen has the yellow tinge near the edges of the

breast-feathers more distinct.

Hab. Unknown. = -or

a. ♀ ad. st. Locality unknown. Zoological Society. (Type of T. mitchellii, Gr.) b. ♀ ad. sk. Locality unknown. Zoological Society. c. Sternum of spec. a.

## 8. Trichoglossus cæruleiceps.

Trichoglossus cæruleiceps, D'Alb. & Salvad. Ann. Mus. Civ. Gen. xiv. p. 41 (1879); Rehnw. & Schal. Journ. f. Orn. 1879, pp. 313, 427; Salvad. Orn. Pap. e Mol. i. p. 295 (1880); Rehnw. Journ. f. Orn. 1881, p. 159 (Consp. Psitt. p. 95); id. Vogelbild. Nachtr. 36 (1883); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 172 (1889).

Adult. Very much like T. nigrogularis, but with the head entirely blue. Total length 10 inches, wing 5.4, tail 4, bill 0.85, tarsus 0.61. (Museo Civico of Genoa.)

Hab. Southern New Guinea, near the Kataw River.

## 9. Trichoglossus novæ hollandiæ.

White-collared Parrot, Penn. Gen. of B. p. 59, pl. 2 (1773); Lath. Syn. i. 1, p. 251, n. 53 (1781); id. Gen. Hist. ii. p. 177 (1822).

Blue-bellied Parrot, Brown, Illustr. p. 14, pl. 7 (1776); White, Voy. N. S. W. pl. at p. 140 Phill. Voy. Bot. Bay, pl. p. 152 (1781); Lath. Syn. i. p. 213, 14 B (1781).

Perruche des Moluques, Daubent. Pl. Enl. 743; Buff. Hist. Nat. Ois.

vi. p. 150 (1779).

Orange-breasted Parrot, Lath. Syn. i. p. 212, 14 A (1781).

Psittaeus moluceanus, Gm. S. N. i. p. 316 (1788) (ex Pl. Enl. 743). Psittacus novæ hollandiæ, Gm. S. N. i. p. 316 (1788) (ex Brown). Psittacus multicolor, Gm. op. cit. p. 328, n. 86 (1788) (ex Pennant); Bechst. Lath. Ueb. p. 79 (1811).

Psittacus hæmatodus, var. B, Lath. Ind. Orn. i. p. 87 (1790).

Psittacus hæmatodus, var.  $\gamma$ , Lath. l. c. (1790).

Psittacus semicollaris, Lath. Ind. Orn. i. p. 103, n. 62 (1790) (= multicolor, Gm.); Vieill. N. D. xxv. p. 343 (1817); Kuhl, Consp. Psitt. p. 97 (1820); Vieill. Enc. Méth. iii. p. 1384 (1823). Perruche à tête bleue (mâle), Levaill. Perr. pl. 24 (1801) (ad.).

? Perruche à tête bleue, dans son jeune âge, Levaill. Perr. pl. 26

(1801) (variety?).

Psittacus cyanogaster, Shaw, Gen. Zool. viii. 2, p. 413, pl. 59 (1811)

(syn. emend.).

Psittacus hæmatopus (!), Bechst. Lath. Ueb. p. 67 (1811); Kuhl, Consp. Psitt. p. 34 (1820) (descr. of the ad. bird only); Less. Voy. Coq. i. pp. 401, 631 (1828); Voigt, Cuv. Uebers. p. 729 (1831); Hahn, Orn. Atl., Papag. p. 13, t. 3 (1834); Dubois, Orn. Gal. pl. 102 (1839).

Psittacus hæmatodus, part., Vieill. Enc. Méth. iii. p. 1386 (1823)

(mâle parfait).

Trichoglossus hæmatodus, Vig. & Horsf. (nec Linn.), Trans. Linn. Soc. xv. p. 289 (1826); Le Maout, Hist. Nat. Ois. p. 99 (1853); Licht. Nomencl. Av. p. 72 (1854).

Trichoglossus hæmatopus, Steph. Gen. Zool. xiv. p. 129 (1826). Australasia novæ-hollandiæ, Less. Tr. d'Orn. p. 209 (1831).

Trichoglossus multicolor, Wagl. Mon. Psitt. p. 553 (1832); Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); G. R. Gr. Gen. B. ii. p. 411, n. 3 (1846); Bp. Rev. et Mag. de Zool. 1854, p. 157, n. 300; Souaneé, Rev. et Mag. de Zool. 1856, p. 226; Bp. Naumannia, 1856, Consp. Psitt. p. 314; G. R. Gr. List Psitt. Brit. Mus. p. 60 (1859); Schleg. Mus. P.-B. Psittaci, p. 108 (1864); Gould, Handb.

B. Austr. ii. p. 93 (1865); Ramsay, P. Z. S. 1864, p. 293; Schleg. Mus. P.-B. Psittaci, Revue, p. 47 (1874); Ramsay, P. Z. S. 1875, p. 602.

Trichoglossus swainsoni, Jard. & Selb. Ill. Orn. iii. pl. 112 (1825–39); Sw. Zool. Ill. 2nd ser. iii. pl. 92 (1832-33); Selb. Nat. Libr., Orn. vi. p. 153, pl. 20 (1836); Sw. Class. B. ii. p. 304 (1837); Gould, B. Austr. v. pl. 48 (pt. ix., 1842); Rehnb. Vög. Neuholl. n. 170 (1850); Sclat. P. Z. S. 1860, p. 372; Ramsay, Ibis, 1865, p. 305; Diggl. Syn. Austr. B. ii. pl. 85. f. 2 (1877); Forbes, P. Z. S. 1878, p. 126, 1879, p. 170 (note); Moseley, Not. Chall. p. 352 (1879);

Forbes, Voy. Chall., Birds, p. 90 (1881).

Trichoglossus novæ hollandiæ, Blyth, Cat. B. Mus. A. S. B. p. 11 (1849); Horsf. & Moore, Cat. B. Mus. E. I. Co. ii. p. 630 (1858); Finsch, Papag ii. p. 820 (1868); G. R. Gr. Hand-list, ii. p. 155, n. 8211 (1870); Garrod, P.Z. S. 1874, p. 587; Cab. § Rohmv. Journ. f. Orn. 1876, p. 324; Gieb. Thes. Orn. iii. p. 658 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 504 (1878); Rohmv. Vogelbild. t. viii. f. 4 (1878–83); id. Journ. f. Orn. 1881, p. 161 (Consp. Psitt. p. 92); Salvin, Cat. B. Strickl. Coll. p. 455 (1882); Sclat. List Vert. An. 8th ed. p. 319 (1883); Sharpe, Report 'Alert,' p. 25 (1884); Ramsay, Tab. List, p. 17, n. 518 (1888); Tristr. Cat. Coll. B. p. 74 (1889); North, Descr. Cat. Nests & Eggs, p. 266 (1889). \*

Adult. Back, tail, and wings green, the whole of the head and the middle of the abdomen blue; a yellowish-green band on the nape; breast yellow, more or less stained with red along the middle, sometimes almost entirely red, except on the sides; some very narrow cross lines of a blue colour, nearly vanishing, on the breast; flanks green, with the base of the feathers yellow, stained with red; under tail-coverts yellow at the base, green at the tip; under wingcoverts red; a yellow band on the under surface of the wing; inner web of the lateral tail-feathers yellow: bill red with yellow tip; feet dark: "iris reddish brown, with a narrow ring of dark brown next the pupil" (Gould). Total length 12 inches, wing 6.7, tail 5.5, bill 0.7, tarsus 0.5.

Young. Breast yellow, with scarcely any red colour; yellow-

green band on the nape searcely visible.

Hab. Eastern Australia from Cape York to Victoria, and Tasmania (Ramsay).

a. Ad. st.	Australia.	Zoological Society.
<i>b-e</i> . Ad. sk.	Australia.	Gould Coll.
f, g. Ad. sk.	Australia (J. T. Cockerell).	Salvin-Godman Coll.
h. Ad. sk.	Australia.	Mrs. Mauger [P.].
i. Ad. sk.	Australia	Sir D. Cooper [P.]. J. E. W. Rishton,
k. Ad. sk.	Australia.	J. E. W. Rishton,
		Esq. [P.].
l. 3 ad. sk.	Prince of Wales Isl., Torres Str., July 1881.	Esq. [P.]. 'Alert' Expedition.
m. $Q$ ad. sk.	Cape York.	'Challenger' Exped.
n. Ad. sk.	Cape York.	Purchased.
o. Ad. sk.	Somerset, Cape York.	Tweeddale Coll.

#### \* Trichoglossus verreauxius.

Trichoglossus verreauxius, Bp. Rev. et Mag. de Zool. 1854, p. 157, n. 352 (Australasia); G. R. Gr. List Psitt. Brit. Mus. p. 61 (1859); id. Handlist, ii. p. 156, n. 8221 (1870).
Trichoglossus verreauxi, Bp. Naumannia, 1856, Consp. Psitt. n. 315; Finsch, Papag. ii. p. 846 (1868); Gieb. Thes. Orn. iii. p. 660 (1877);

Rehnw. Journ. f. Orn. 1881, p. 155 (Consp. Psitt. p. 91); id. Vogelbild. Nachtr. 33.

Bright green; cheeks and throat bluish; breast, abdomen, and sides with irregular yellow and orange cross bands; forehead and eyebrows red; middle of the back with yellow spots (Bonaparte).

Hab. Unknown.

This bird, which, according to Bonaparte, is a large and true Trichoglossus, was only known from Bonaparte's original and incomplete description: the type specimen is in the Museum of Paris; but there is a second specimen in the British Museum, which has been labelled by Dr. Finsch as T. verreauxius; it agrees pretty well with Bonaparte's description; it is not symmetrical, and after some consideration I have arrived at the conclusion that most likely it is a hybrid between T. novæ hollandiæ and Glossopsittacus concinnus.

p. Ad. sk.	Port Albany, N. Australia (C. Coxen).	
q. ♂ ad. sk.	Port Molle, Queensland, May 1881.	'Alert' Expedition.
<i>r</i> – <i>y</i> . Ad. sk.	Cape Upstart, Queensland, April 1843.	J. B. Jukes [P.].
z. Ad. sk.	Clarence River, New South Wales.	Tweeddale Coll.
a'. Ad. sk.	S. Australia.	Sir G. Grev [P.].
b'. Ad. sk.	S. Australia.	Sir G. Grey [P.]. C. D. Fortnum [P.].
c', d', Ad. sk.	Melbourne.	H. Saunders, Esq.
,		[P.].

#### 10. Trichoglossus rubritorques.

? Blue-bellied Parrot, var. C, Lath. Syn. Suppl. i. p. 59 (1787). ? Psittacus hæmatodus, var.  $\delta$ , Lath. Ind. Orn. i. p. 87 (1790).

Trichoglossus rubritorquis, Vig. & Horsf. Trans. Linn. Soc. xv. p. 291 (1826); Wagl. Mon. Psitt. p. 552 (1832); Lear, Parr. pl. 34 (1832); Less. Compl. de Buff. ix. p. 226 (1837); id. op. cit. 2nd ed. p. 613 (1838); Gould, B. Austr. v. pl. 49 (pt. ix., 1842); G. R. Gr. Gen. B. ii. p. 411, n. 2 (1846); Rehnb. Vög. Neuholl. n. 171 (1850); Bp. Rev. et May. de Zool. 1854, p. 157, n. 301; Weinland, Journ. f. Orn. 1854, Ber. p. 1xxv; Souancé, Rev. et May. de Zool. 1856, p. 226; Bp. Naumannia, 1856, Consp. Psitt. n. 316; Elsey, P. Z. S. 1857, p. 27; G. R. Gr. List Psitt. Brit. Mus. p. 60 (1859); Gould, P. Z. S. 1863, p. 232; Schleg. Mus. P.-B. Psittaci, p. 108 (1864); Rosenb. Journ. f. Orn. 1864, p. 112; Gould, Handb. B. Austr. ii. p. 95 (1865); Finsch, Neu-Guin. p. 158 (1865); Müll. P. Z. S. 1869, p. 279; G. R. Gr. Hand-list, ii. p. 155, n. 8210 (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 48 (1874); Ramsay, P. Z. S. 1875, p. 602; Diggl. Syn. Austr. B. ii. pl. 85. f. 1 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 195, n. 505 (1878); Salvad. Orn. Pap. e Mol. i. p. 299 (1880); Ramsay, Tab. List, p. 17, n. 519 (1888); Salvad. Ann. Mus. Civ. Gen. (2) ix. p. 493 (1890). Trichoglossus rubritorquatus, Finsch, Papaga, ii. p. 824 (1868); Gieb.

Trichoglossus rubritorquatus, Finsch, Papag. ii. p. 824 (1868); Gieb. Thes. Orn. iii. p. 659 (1877); Rehnw. Vogelbild. t. viii. f. 5 (1878–83); id. Journ. f. Orn. 1881, p. 161 (Consp. Psitt. p. 92).

Adult. Back, wings, and tail green; the whole head and throat blue; breast and a band on the nape orange-red; a blue cross band on the hind neck; interscapular feathers with the base orange-red; sides and under wing-coverts vermilion; middle of the abdomen dark green; flanks yellow, with the edges of the feathers green; under tail-coverts greenish yellow, tipped with green; the base of the inner web of the quills yellow; lateral tail-feathers with the inner web yellow: bill red; feet ashy grey; "iris red, with a narrow ring of yellowish round the pupil" (Gould). Total length 12 inches; wing 6·3, tail 6, bill 0·85, tarsus 0·65.

Hab. N.W. Australia.

a. Ad. sk.	Australia.	Linnean Society.
b. Ad. sk. c, d. Ad. sk.	N.W. Australia. N.W. Australia.	(Type of species.) Sir G. Grey [P.]. Capt. Bowyer Bower
e, f. o ad.; g,	N.W. Australia.	J. R. Elsey, Esq. [P.].

N.W. Australia (J. T. Cockerell). k, l. Ad. sk. m, n. Ad. st. Port Essington.

> Port Essington. Gulf of Carpentaria.

Salvin-Godman Coll. Capt. W. Chambers [P.]. Gould Coll.

Gould Coll.

### 11. Trichoglossus rosenbergi.

Trichoglossus rosenbergii, Schleg. Ned. Tijdschr. Dierk. iv. p. 9 (1871); id. Mus. P.-B. Psittaci, Revue, p. 47 (1874); Rosenb. Reist. naar Geelvinkb. p. 136, t. xv. f. 2 (1875); Meyer, Sitzb. Isis Dresd. 1875, p. 78; Salvad. Ann. Mus. Civ. Gen. x. p. 36, p. 82 (1877); Rosenb. Malay. Archip. p. 591 (1878–79); Salvad. Orn. Pap. e Mol. i. p. 298 (1880); Rohnw. Journ. f. Orn. 1881, p. 159 (Consp. Psitt. p. 95); id. Vogelbild. Nachtr. 37 (1883); Guillem. P. Z. S. 1885, p. 632; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 173 (1889).

Adult. Back, wings, and tail green; head blue, towards the occiput purple; a narrow red band on the occiput; another yellowishgreen band, sometimes mingled with red, on the nape; interscapular feathers with concealed red bands; breast and lower abdomen red, with dark blue bands on the edges of the feathers; middle of the abdomen dark blue; flanks yellowish green, with dark green bands; under tail-coverts yellowish green, with green spots at the tip; under wing-coverts and quills at the base of the inner web red; inner web of the lateral tail-feathers yellowish green: bill orange-Total length 11 inches, wing 4.80, tail 4.12, bill red; feet dark. 0.85, tarsus 0.65.

Hab. Mysore Island, in Geelvink Bay.

a. & ad. sk. b. Ad. sk.

o. Ad. sk.

*p*, *q*. Ad. sk.

Mysore Isl. (Dr. A. B. Meyer). Mysore Isl.

Tweeddale Coll. Gould Coll.

## 12. Trichoglossus ornatus.

Avis paradisiaca orientalis elegantissima, Seba, Mus. i. t. 60. ff. 2, 3.

The Long Parrakeet, Edw. Birds, iii. pl. 174 (1750).

Psittacus minor e coccineo viridis, Edw. op. cit. iii. p. 247 (1750). Psittaca indica varia, Briss. Orn. iv. p. 366 (1760). Psittacus ornatus, Linn. S. N. i. p. 143, n. 19 (1766); Gm. S. N. i.

p. 324, n. 19 (1788); Lath. Ind. Orn. i. p. 91, n. 28 (1790); Bechst. Lath. Uebers. p. 70 (1811); Shaw, Gen. Zool. viii. 2, p. 416, Bettis: Latt. Ceces. p. 18 (1811); State, George Bettis: 1811); Kuhl, Consp. Psitt. p. 35 (1820); Raffl. Trans. Linn. Soc. xiii. p. 281 (1821) (Malay Peninsula!); Vieill. Enc. Méth. iii. p. 1390 (1823); Voigt, Cuv. Uebers. p. 734 (1831); Müll. & Schleg. Verh. Land- en Volkenk. pp. 90, 182 (1839-44).

La Perruche variée des Indes orientales, Daubent. Pl. Enl. 552. Psittacus inquinatus, Müll. S. N. Suppl. p. 79 (1776); Cassin, Pr.

Ac. Philad. 1864, p. 240.

La Perruche Lori, Levaill. Perr. pl. 52 (1801). Lorius ornatus, *Steph. Gen. Zool.* xiv. 2, p. 132 (1826). Australasia malaisiæ, *Less. Tr. d'Orn.* p. 210 (1831).

Eos ornata, Wagl. Mon. Psitt. p. 562 (1832); G. R. Gr. Gen. B. ii.

p. 417, n. 8 (1845); Blyth, Cat. B. As. Soc. Beng. p. 11, n. 52 (1849); id. Journ. As. Soc. Beng. xix. p. 237 (1850); Bp. P. Z. S. 1850, p. 27.

Psittacus (Trichoglossus) ornatus, Müll. & Schleg. Verh. Land- en Volkenk. p. 472 (1839-44); Rosenb. Journ. f. Orn. 1862, p. 60; id. Natuurk. Tijdschr. Ned. Ind. xxv. p. 139 (Celebes, Buton, and Sula 1st.)

Trichoglossus ornatus, G. R. Gr. Gen. B. ii. p. 411, n. 6 (1846);

Hartl. Erst. Nachtr. Verz. p. 15 (1846); Bp. Rev. et Mag. de Zool.
1854, p. 157, n. 299; id. Naumannia, 1856, Consp. Psitt. n. 311;

Horsf. & Moore, Cat. B. Mus. E. I. Co. ii. p. 631 (1858); Blyth,
Journ. A. S. B. xxvii. p. 280 (note) (1858); Wall. Ibis, 1859,
pp. 112, 113; G. R. Gr. List Psitt. Brit. Mus. p. 62 (1859);
Sclat. P. Z. S. 1861, pp. 226, 417; G. R. Gr. ibid. p. 357; Wall.
P. Z. S. 1864, pp. 291, 295; Schleg. Mus. P.-B. Psittaci, p. 112
(1864); Finsch, Neu-Guin. p. 158 (1865); id. Papag. ii. p. 842
(1868); G. R. Gr. Hand-list, ii. p. 155, n. 8216 (1870); Wald.
Trans. Zool. Soc. viii. p. 32 (1872); Schleg. Mus. P.-B. Psittaci,
Revue, p. 49 (1874); Salvad. Ann. Mus. Civ. Gen. vii. p. 645
(1875); Brüggem. Abh. naturw. Ver. Brem. v. p. 42 (1876);
Lenz. Journ. f. Orn. 1877, p. 364; Gieb. Thes. Orn. iii. p. 658
(1877); Rosenb. Malay. Archip. p. 274 (1878); Meyer, Ibis, 1879,
pp. 53, 145; Forbes, P. Z. S. 1879, p. 170 (note); Salvad. Orn.
Pap. e Mol. i. p. 299 (1880); Tweedd. Orn. Works, p. 136 (1881);
Rchnw. Vogelbild. t. viii. f. 7 (1878–83); id. Journ. f. Orn. 1881,
p. 160 (Consp. Psitt. p. 160); Sclat. List Vert. An. 8th ed.
p. 320 (1883); Blas. Journ. f. Orn. 1883, pp. 115, 134; id. Zeitschr.
f. ges. Orn. 1885, p. 220; Guillem. P. Z. S. 1885, p. 544; Blas.
Zeitschr. f. ges. Orn. 1886, pp. 85, 206; Meyer, Vogel-Skelett.
t. 1xii. (1879–88); Tristr. Cat. Coll. B. p. 74 (1889).

Adult. Back, hind neck, wings, and tail green; pileum and ear-coverts purple-blue; a red band with dark blue cross lines on the occiput; a yellow band on each side of the neck; concealed bands on the interscapular feathers also yellow; cheeks and chin red; throat and breast also red, but with blackish-blue bands; middle of the abdomen green; sides yellow; vent and under tail-coverts yellowish green, the feathers edged with green; under wing-coverts yellow; quills underneath dusky black, without coloured band; lateral tail-feathers yellowish, with the base of the inner web red. Total length 9.8 inches, wing 5.1, tail 3.2, bill 0.8, tarsus 0.6.

Young. Differs from the adult in having the colours, and especially the red on the cheeks and breast, paler.

Hab. Celebes, Buton, and the Togian Islands.

11100. CC1C	,00, 24(04) 444 140 0	
a. Ad. sk.	Celebes ?	Sir Stamford Raffles [P.].
<ul><li>b. Ad. sk.</li><li>c. Ad. sk.</li></ul>	Celebes? Menado, N. Celebes.	Laugier Coll. Wallace Coll.
d. ♂ ad. sk. e. ♂ ad. sk.	Makassar, S. Celebes. Makassar, S. Celebes (A. R. W.).	Wallace Coll. Gould Coll.
f. Juv. sk.	Celebes.	Wallace Coll. Tweeddale Coll.
g, h. Ad. sk. i. Ad. st.	Celebes.	Baron A. von Hügel
k. ♀ ad. st.	Celebes?	Zoological Society. Tweeddale Coll.
c. Au. var. sn.	Celebes:	I weeddale Coll.

#### 8. PSITTEUTELES.

Type.

Psitteuteles, Bp. Rev. et Mag. de Zool. 1854, p. 157; id. Naumannia, 1856, Consp. Psitt. gen. 80 . . . . . . P. euteles.

Range. Australia, Tenimber Islands, Timor, Celebes, and Sula Islands.

### Key to the Species.

a. Underside of the quills with no coloured band.	
a'. Larger; breast bright yellow	flavoviridis, p. 63.
b'. Smaller; breast greenish yellow	) meyeri, p. 63. ) bonthainensis, p. 64.
b. Underside of the quills with a coloured band.	
a'. Band on the underside of the quills yellow.	euteles, p. 64.
b'. Band on the underside of the quills red	chlorolepidotus, p. 65.

#### 1. Psitteuteles flavoviridis.

Trichoglossus flavoviridis, Wall. P. Z. S. 1862, p. 337, pl. xxxix., 1864, pp. 292, 295 (partim); Finsch, Neu-Guin. p. 158 (1865); id. Papag. ii. p. 849 (1868); G. R. Gr. Hand-list, ii. p. 155, n. 8218 (1870); Wald. Ann. & Mag. N. H. (4) viii. p. 281 (1871); Schleg. Mus. P.-B. Psittaci, Revue, p. 49 (1874); Gieb. Thes. Orn. iii. p. 657 (1877); Rosenb. Malay. Archip. p. 275 (1878); Rehnw. Journ. f. Orn. 1881, p. 156 (Consp. Psitt. p. 92); id. Vogelbild. Nachtr. 34 (1883); Blas. Journ. f. Orn. 1883, p. 125.

Adult. Green; head olive-yellow; nape with a dusky collar; face, cheeks, and chin dusky green, each feather margined with yellow; fore neck, breast, and upper part of the belly bright yellow, each feather narrowly margined with dark green, producing a regular scaly appearance; belly, vent, and under tail-coverts yellowish green, with green edges to the feathers; the interscapular feathers with concealed yellow bands; quills dusky black underneath; tail-feathers beneath ochre-yellow: bill orange-red; orbits bare, yellow; feet lead-colour; iris orange. Total length 8.50 inches, wing 4.80, tail 3.20, bill 0.72, tarsus 0.51.

Hab. Sula Islands.

a. Ad. sk.	Sula Isl.	Wallace Coll.
b. ♀ ad.; c. Ad. sk.	Sula Isl.	(Type of species.) Wallace Coll.
<ul><li>d. of ad. sk.</li><li>e. Ad. sk.</li></ul>	Sula Isl. (A. R. Wallace). Sula Isl. (A. R. Wallace).	Gould Coll. Tweeddale Coll.

### 2. Psitteuteles meyeri.

Trichoglossus flavoviridis, part., Wall. P. Z. S. 1862, p. 337, 1864, pp. 292, 295 (Menado).

Trichoglossus meyeri, Wald. Ann. & Mag. N. H. (4) viii. p. 281 (1871); id. Trans. Zool. Soc. viii. p. 32, pl. iv. (1872); Schleg. Mus. P.-B. Psittaci, Revue, p. 50 (1874); Salvad. Ann. Mus. Civ.

Gen. vii. p. 646 (1875); Brüggem. Abh. naturw. Ver. Brem. v. p. 42 (1876); Gieb. Thes. Orn. iii. p. 658 (1877); Rosenb. Malay. Archip. p. 275 (1878); Meyer, Ibis, 1879, p. 54; Tweedd. Orn. Works, pp. 113, 136 (1881); Wardl. Ramsay, Tweedd. Orn. Works, p. 670 (1881); Rchnw. Vogelbild. t. xv. f. 3 (1878-83); id. Journ. f. Orn. 1881, p. 156 (Consp. Psitt. p. 92); Blas. Journ. f. Orn. 1883, pp. 125, 134; Guillem. P. Z. S. 1885, p. 544; Meyer, Vogel-Skelett. t. xxiv. (1879-88).

Adult. Green; pileum olive-brown, tinged with golden, especially on the forehead; cheeks, lores, and throat brown-green, each feather with a yellow border; a bright yellow patch on the ear-coverts; interscapular region with the feathers yellow at the base; under surface of the body greenish yellow, each feather bordered with green; abdomen and under tail-coverts more greenish and less yellowish; quills underneath dark grey; tail-feathers green, the lateral ones with the inner web and the underside yellowish: "bill orange-red; feet greyish blue; iris cherry-red" (Meyer). Total length 7 inches, wing 4, tail 2·70, bill 0·60, tarsus 0·41.

Young. Duller; the pileum nearly green; the breast more green

and less yellow.

Hab. Celebes; according to Dr. Meyer confined to the northern part.

a. Ad. sk.	Menado.	Tweeddale Coll.
b. Ad. sk.	Menado.	(Type of species.) Tweeddale Coll.
c. Ad. sk.	Gorontalo, N. Celebes.	Tweeddale Coll.
d. Juv. sk.	N. Celebes.	Tweeddale Coll.
e, f. Ad. sk.	Celebes.	Gould Coll.
g, h. Ad. et	Celebes.	Dr. A. B. Meyer
juv. sk.		[C.].*

#### 3. Psitteuteles euteles.

Psittacus euteles, Temm. Pl. Col. 568 (Timor) (1835); id. Tabl. Méth. p. 61 (1839); S. Müll. & Schleg. Verh. Land- en Volkenk. p. 209 (1839-44).

Conurus euteles, Bourjot, Perr. pl. 43 (3) (1837-38). Perruche iris femelle, Bourjot, Perr. pl. 44b (2) (1837-38).

Trichoglossus meyeri, var. Bonthainensis, Meyer, Sitz. u. Abh. Ges. Isis, 1884, Abh. i. p. 16. (Bonthain, S. Celebes.)

Like T. meyeri, Wald., but differs in the following particulars:—1. The yellow colour of the head is less apparent, and not so sharply separated from the green colour of the neck. 2. The green colour of the back of the neck is brighter and makes a kind of collar. 3. The throat, the cheeks, and the sides of neck are not undulated with reddish yellow, but more bluish green; the underside of the feathers of those parts is blue and not yellow. 4. The green bands of the underparts are broad. 5. The wings underneath are more blackish. 6. The yellow colour on the lower back is less apparent. Length of the wing 4.12 inches, tail 2.83, bill 0.66, tarsus 0.47. (Meyer.)

Hab. Bonthain Mountain, S. Celebes.

<sup>\*</sup> I am not acquainted with the following subspecies :-

Psittacus (Trichoglossus) enteles, S. Müll. & Schleg. Verhand.

Land- cn Volkenk. p. 472 (1839-44).

Coriphilus euteles, G. R. Gr. Gen. B. iii. p. 417, n. 8 (1845); id. List Psitt. Brit. Mus. p. 59 (1859); Schleg. Dierent. p. 78 (1864). Psitteuteles euteles, Bp. Rev. et Mag. de Zool. 1854, p. 157; id. Naumannia, 1856, Consp. Psitt. n. 318; G. R. Gr. Hand-list, ii. p. 157, n. 8233 (1870).

Trichoglossus ochreocephalus, Blyth, Journ. A. S. B. xxvii. p. 279

(1858); G. R. Gr. P.Z. S. 1861, p. 436. Trichoglossus euteles, Sclat. P. Z. S. 1860, p. 226; Wall. Ibis, 1861, p. 349; id. P. Z. S. 1863, p. 484 (Flores), 1864, pp. 292, 295; Finsch, Neu-Guin. p. 158 (1865); id. Papay. ii. p. 850 (1868); Gieb. Thes. Orn. iii. p. 657 (1877); Meyer, Verh. z.-b. Gesellsch. Wien, 1881, p. 769 (Lettie), p. 772 (Babbar); Rehmv. Journ. f. Orn. 1881, pp. 156, 396 (Consp. Psitt. pp. 92, 228); id. Vogelbild. t. xxx. f. 5 (1878-83); Tristr. Cat. Coll. B. p. 74 (1889). Psittacus (Belocercus) euteles, Rosenb. Journ. f. Orn. 1862, p. 66;

id. Nat. Tijdschr. Ned. Ind. 1863, p. 146.

Nanodes enteles, Schleg. Mus. P.-B. Psittaci, p. 112 (1864); id.

op. cit. Revue, ii. p. 56 (1874).

Neopsittacus euteles, Meyer, Zeitschr. f. ges. Orn. 1884, pp. 195, 196 (Timor-laut); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 173 (1889).

Adult. Green, underneath yellowish green; head entirely yellowish olive; quills underneath blackish, with the inner webs towards the base yellow; tail-feathers on the inner webs and underneath yellowish green: bill yellow?; feet dark. Total length 10.50 inches, wing 5·30, tail 4·20, bill 0·65, tarsus 0·54.

Young. Has the head more greenish, and less distinctly separated

from the green body.

Hab. Timor, Flores, Wetter, Lettie, Babbar, and Timor-laut. Specimens from Flores have greener and darker heads; the underside of the body also is of a darker green.

a. Ad. st. b. Ad. st. c-f. Ad. sk. g. Q imm. sk. h. Ad. sk. *i−l*. Ad. sk. m. Ad. sk.

Timor. Timor. E. Timor. E. Timor (Wallace). E. Timor (Wallace). Flores. Flores.

Purchased. Zoological Society. Wallace Coll. Gould Coll. Tweeddale Coll. Wallace Coll. Wallace Coll.

## 4. Psitteuteles chlorolepidotus.

Psittacus chlorolepidotus, Kuhl, Consp. Psitt. p. 48 (1820); Vig. & Horsf. Trans. Linn. Soc. xv. p. 291 (note) (1826); Weinl. Journ. f. Orn. 1854, B. p. xxv.

Spotted Parrot, Lath. Gen. Hist. ii. p. 197 (1822).

Trichoglossus matoni, Lath. MSS.; Vig. & Horsf. Trans. Linn. Soc. xv. p. 291 (1826); Lear, Parrots, pl. 35 (1832); Less. Compl. de Buff., Ois. ix. p. 226 (1837); id. op. cit. 2nd ed. p. 313 (1838).

Trichoglossus? chlorolepidotus, Steph. Gen. Zool. xiv. 2, p. 130 (1826); Wagl. Mon. Psitt. p. 550 (1832); Jard. & Selb. Ill. Orn. iii. pl. ex; Gould, B. Austr. v. pl. 50 (pt. x., 1843); G. R. Gr. Gen. B. ii. p. 411, n. 5 (1845); Rehnb. Vög. Neuholl. n. 172 (1850); Blyth, Cat. B. As. Soc. Beng. p. 12 (1849); Bp. Rev. et Mag. de Zool. 1854, p. 157, n. 303; Souancé, Rev. et Mag. de Zool. 1856, p. 226; Bp. Naumannia, 1856, Consp. Psitt. n. 317; G. R. VOL. XX.

66 LORIID.E.

Gr. List Psitt. Brit. Mus. p. 62 (1859); Schleg. Mus. P.-B. Psittaci, p. 111 (1864); Gould, Handb. B. Austr. ii. p. 96 (1865); Ramsay, Ibis, 1865, p. 305; Finsch, Papag. ii. p. 847 (1868); G. R. Gr. Hand-list, ii. p. 155, n. 8217 (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 49 (1874); Gieb. Thes. Orn. iii. p. 656 (1877); Diggl. Syn. B. Austr. ii. pl. 86. f. 1 (1877); Broadb. Pr. R. Soc. Queensl. iv. p. 27 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 195, n. 506 (1878); Rchnw. Vogelbild. t. viii. f. 3 (1878-83); id. Journ. f. Orn. 1881, p. 156 (Consp. Psitt. p. 92); Salv. Cat. B. Strickl. Coll. p. 455 (1882); Sclat. List Vert. An. 8th ed. p. 320 (1883); Sharpe, Report 'Alert,' p. 25 (1884); Broadb. Pr. R. Soc. Queensl. (2) ii. p. 124 (1885); North, Pr. Linn. Soc. N. S. W. (2) ii. p. 986 (1887), iii. p. 1777 (1888); Ramsay, Tab. List, p. 17, n. 520 (1888); Tristr. Cat. Coll. B. p. 74 (1889); North, Descr. Cat. Nests & Eggs, p. 267 (1889).

Australasia viridis, Less. Tr. d'Orn. p. 210 (1831); id. Compl. de Buff., Ois. ix. p. 226 (1837); id. op. cit. 2nd ed. p. 612 (1838); Pucher. Rev. et Mag. de Zool. 1853, p. 159; Hartl. Journ. f. Orn.

1855, p. 422.

Adult. Green; on the crown a bluish-green tinge; the feathers of the interscapular region, throat, and breast yellow, margined at the tip with a crescent of green; on the throat and on the sides some feathers have the yellow base tinged with red; axillaries, under wing-coverts, and the inner webs of the quills towards the base red; tail beneath ochre-yellow: bill red, inclining to orange at the tip; cere and orbits olive; feet lead-colour (?); iris scarlet, with a circle of buff round the pupil, in some specimens buffy yellow. Total length 10 inches, wing 5.50, tail 4.20, bill 0.70, tarsus 0.50.

Hab. Australia, from Rockingham Bay, through the Interior, to Southern Australia.

a. Ad. st.	Australia.	Linnean Society. (Type of <i>T. matoni</i> .)
b. Ad. sk.	Australia.	Gould Coll.
e. Ad. sk.	Somerset, Cape York (?) (J. E.	Tweeddale Coll.
d. Ad. sk.	Cockerell). Clarence River.	Tweeddale Coll.
e. Ad. sk.	Queensland.	Tweeddale Coll.
f, g. Ad. sk.	N.E. Queensland (Cavin & Grant).	Sydney Museum [P.].
h. ♀ ad. sk.	Port Curtis, Queensland, April.	H.M.S. 'Alert.'
i. Ad. sk.	Queensland (E. Waller).	Salvin-Godman Coll.
k. l. Ad. sk.	Australia (J. T. Cockerell).	Salvin-Godman Coll.

#### 9. PTILOSCLERA.

Ptilosclera, Bp. Compt. Rend. xliv. p. 597, gen. 66 (1857); Apple 1867, G. R. Gr. List Psitt. Brit. Mus. p. 59 (1859) . . . . . P. versicolor.

#### 1. Ptilosclera versicolor.

Trichoglossus versicolor, Vig. in Lear's Ill. Parr. pl. 36 (1832); Selb. Nat. Libr. vi. p. 157, pl. 21 (pessima) (1836); Gould, B. Austr. v. pl. 51 (pt. ix., 1842); G. R. Gr. Gen. B. ii. p. 411, n. 9 (1846); Gould in Voy. Beag. i. App. p. 481 (1846); Leich. Journ. Overl. Exp. to Port Essington, p. 441 (1847); Rehnb. Vög. Neuholl. n. 173 (1850); Jacq. et Pucher. Voy. Pôle Sud, Zool. iii. p. 102 (1853);

Hartl. Journ. f. Orn. 1854, p. 165; Elsey, P. Z. S. 1857, p. 27; Zuchold, Journ. f. Orn. 1858, p. 39; Finsch, Papag. ii. p. 853 (1868); Gieb. Thes. Orn. iii. p. 560 (1877); Rehnw. Journ. f. Orn. 1881, p. 155 (Consp. Psitt. p. 91); Salvin, Cat. B. Strickl. Coll. p. 456 (1882); Rehnw. Vogelbild. t. xxx. f. 4 (1883); Tristr. Cat. Coll. B. p. 74 (1889).

Conurus Iori scintillatus, Bourj. Perr. pl. 52 (1837-38).

Trichoglosse versicolor, Hombr. et Jacq. Voy. Pôle Sud, Atlas, pl. 24 bis, f. 1 (1845).

Psittenteles versicolor, Bp. Rev. et Mag. de Zool. 1854, p. 157, n. 304; Souancé, Rev. et Mag. de Zool, 1856, p. 226; Bp. Naumannia, 1856, Consp. Psitt. n. 319.

Coriphilus versicolor, G. R. Gr. List Psitt. Brit. Mus. p. 59 (1859); Schleg. Dierent. p. 78 (1864); Finsch, Neu-Guin. p. 158 (1865). Nanodes versicolor, Schleg. Mus. P.-B. Psittaci, p. 115 (1864); id.

op. cit. Revue, p. 53 (1874).

Ptilosclera versicolor, Gould, Handb. B. Austr. ii. p. 98 (1865); G. R. Gr. Hand-list, ii. p. 156, n. 8224 (1870); Masters, Pr. Linn. Soc. N. S. W. ii. p. 274 (1877).

Trichoglossus (Ptilosclera) versicolor, Ramsay, Pr. Linn. Soc. N.S. W. ii. p. 195, n. 507 (1878); id. Tab. List, p. 17, n. 521 (1888). Neopsittacus versicolor, Salvad. Orn. Pap. e Mol. iii. p. 519 (1882).

Adult male. Green, with yellow-green streaks nearly all over the body, more yellowish on the underside; crown and lores red; ear-coverts and a band on the occiput yellowish green; cheeks and a collar on the nape bluish; breast vinous red, brighter on the sides; quills underneath blackish; inner web and underside of the tail-feathers yellowish green: bill red, cere and naked space round the eyes greenish white; feet light ash-grey; iris brown. Total length 8 inches, wing 4.80, tail 3, bill 0.60, tarsus 0.45.

Immature bird. Differs from the adult in being smaller, paler, and in having the red on the crown confined to the forehead; the rest of the crown is greenish blue with yellow streaks.

Young. Pale dull green, with scarcely any streaks; the forehead

pale red.

Hab. Northern and Western Australia.

Capt. W. Chambers [P.]. a, b. Ad. st. Port Essington. e. 9? ad. sk. Port Essington. Capt. O. Stanley [P.] Depôt, N.W. Australia, Dec. 1855. d-h.  $\beta \supseteq ad. et$ J. R. Elsey, Esq. [P.]. imm. sk. i, k. Ad. sk. N.W. Australia. Capt. Bowyer Bower [P.]. l. Ad. sk. Australia. Purchased. N. Australia (J. T. Cock-Salvin-Godman Coll. m, n. Ad. et imm. erell). o, p. Ad. et juv. Cape York (J. T. Cock-Tweeddale Coll. sk. erell).

#### 10. GLOSSOPSITTACUS.

Type. Centrourus, G. R. Gr. (nec Sw.), List Gen. B. p. 51 (1840) G. concinnus. Glossopsitta, Bp. Rev. et Mag. de Zool. 1854, p. 157.... G. concinnus. Glossopsittacus, Sundev. Meth. Nat. Av. Disp. Tent. p. 71 G concinnus.  $(1872) \dots \dots$ 

Range. Australia, New Caledonia, and S.E. New Guinea.

### Key to the Species.

- I. Underparts with shaft-streaks ..... goldiei, p. 68. II. Underparts with no shaft-streaks. a. A red spot on the crissum ... ..... diadematus, p. 68.
  - b. No red spot on the crissum; hind neck olive.
    - a'. Cheeks with no red. a". Larger; ear-coverts red, like the forehead. concinnus, p. 69.
    - b". Smaller; ear-coverts yellow mixed with red, Cheeks, as well as the forehead and chin, all round the base of the bill, red ...... pusillus, p. 71.

### 1. Glossopsittacus goldiei.

Trichoglossus goldiei, Sharpe, Journ. Linn. Soc., Zool. xvi. pp. 318, 426 (1882); Rehnw. Vogelbild. Nachtr. n. 29 (1883); Sharpe, Gould's B. New Guin. pt. xiv. pl. 3 (1883); Rehnw. & Schal. Journ.

f. Orn. 1883, p. 416. Neopsittacus goldiei, Salvad. Ann. Mus. Civ. Gen. xviii. p. 419, n. 11 (1882); id. Orn. Pap. e Mol. iii. p. 519 (1882); id. Mem. R. Ac.

Sc. Tor. ser. 2, xl. p. 173 (1889).

Adult male. Green, pileum crimson; from behind the eye a broad purplish-blue band extends to the occiput; lores, sides of face, and ear-coverts lilac-red; the upper ear-coverts and feathers of the nape washed with lilac-blue, the last are faintly edged with dull red; hind neck mottled with yellow-green edges to the feathers; under surface of body and under wing-coverts yellowish green, streaked with darker green down the centre of the feathers; quills dusky below, with an oily yellow spot on the inner web, forming a diagonal band across the underside of the wing; tail green, underneath oily green: bill black; feet dark. Total length 7 inches, wing 4.20, tail 3.10, culmen 0.55, tarsus 0.50.

Female or immature bird. Similar to the adult, but the red on the head confined to the forehead; the vertex and the occiput have the feathers purplish blue towards the tip and green at the base.

Hab. Astrolabe Mountains, S.E. New Guinea.

a. 3 ad. sk. b. ♀ or imm. sk.

A. Goldie [C.]. A. Goldie [C.]. Astrolabe Mountains. Astrolabe Mountains. (Type of species.)

## 2. Glossopsittacus diadematus.

Psitteuteles diadema (!), Verr. et O. Des Murs, Rev. et Mag. de Zool. 1860, p. 390, 1862, p. 132; Marie, Act. Soc. Linn. Bord. xxvii. p. 327 (1870); id. Ibis, 1877, p. 362; Layard, Ibis, 1878, p. 253; Oust. Bull. Soc. Philom. Paris, iii. p. 218 (1879).

Trichoglossus diadema, G. R. Gr. Hand-list, ii. p. 157, n. 8232 (1870);

Layard, Ibis, 1882, pp. 526, 543.

Trichoglossus diadematus, Finsch, Papag. ii. p. 867 (1868); Gieb.
 Thes. Orn. iii. p. 657 (1877); Rchnw. Journ. f. Orn. 1881,
 p. 147 (Consp. Psitt. p. 83); id. Vogelbild. Nachtr. n. 28 (1883).

Female. Green, lighter on the forehead, lores, below the eyes, on the ear-coverts, sides of the neck, and under surface; crown blue: cheeks and throat yellowish; a red spot on the vent; tail-feathers green, the four lateral ones yellowish green towards the tips, and with the inner webs red at the bases, and with a black band between the yellow and the red: bill long, much arched and pointed; feet dark. "Total length 200 millim., wing 93, tail 90, bill 14, tarsus 10" (Verreaux).

Hab. New Caledonia.

Only the type, a female, of this bird is known; it is preserved in the Colonial Collection in the Palais de l'Industrie iu Paris. I have to thank M. Sallé for a sketch of the type. The green forehead, the blue crown, the yellow cheeks and throat, and the red spot on the vent distinguish at a glance this species from any other.

I am not at all sure about its generic characters, and it may possibly belong to the genus Hypocharmosyna.

### 3. Glossopsittacus concinnus.

Pacific Parrot (var.), Phill. Voy. Bot. Bay, p. 155, pl. 21 (1789). Psittacus australis, Lath. (nec Gm.) Ind. Orn. i. p. 104, n. 66 (1790); Bechst. Lath. Ueb. p. 80 (1811-12); ? Vieill. N. D. xxv. p. 342 (1817); ? id. Enc. Meth. iii. p. 1384 (1823); Hahn, Orn. Atl., Papag. p. 63, p. 48 (1836); Thienem. Fortpflanz. d. ges. Vög. p. 74 (1846).

Psittacus concinnus, Shaw, Nat. Misc. iii. pl. 87 (1791); Kuhl, Consp. Psitt. p. 46 (1820); Voigt, Cuv. Uebers. p. 735 (1831); Weinl.

Journ. f. Orn. 1854, B. p. lxxv.

Crimson-fronted Parrot, Lath. Gen. Syn. Suppl. ii. p. 87 (1802); id. Gen. Hist. ii. p. 181, with var. A, B, C (1822). La Perruche à bandeau rouge, Levaill. Perr. pl. 48 (1801).

Psittacus pacificus, Shaw, Gen. Zool. viii. 2, p. 419 (1811).

Psittacus rubrifrons, Bechst. Lath. Ueb. p. 84, pl. 11 (1811); Hahn, Orn. Atl., Papag. p. 24, pl. 10 (1834).

Psittacus velatus, Vieill. N. D. xxv. p. 373 (1817); id. Enc. Méth.

iii. p. 1405 (1823).

Trichoglossus concinnus, Vig. & Horsf. Trans. Linn. Soc. xv. p. 292 (1826); Steph. Gen. Zool. xiv. 2, p. 130 (1826); Jard. & Selb. Ill. of Orn. i. pl. 34 (1839); Less. Compl. de Buff., Ois. ix. p. 226 (1837); id. op. cit. 2nd ed. p. 612 (1838); Fraser, P. Z. S. 1839, p. 113; Gould, B. Austr. v. pl. 52 (pt. xiii., 1843); Rehnb. Vög. Neuholl. Thes. Orn. iii. p. 656 (1877); Diggl. Syn. B. Austr. ii. pl. 86 f. 2 (1877); Forbes, P. Z. S. 1879, p. 170, figs. 5, 6, pl. xvi. figs. 5, 6; Rehnw. Journ. f. Orn. 1881, p. 148 (Consp. Psitt. p. 84); Salv. Cat. B. Strickl. Coll. p. 456 (1882); Rehnw. Vogelhild. t. xxx. f. 3 (1883); Selat. List Vert. An. 8th ed. p. 320 (1883); Legge, Pr. R. Soc. Tasm. 1886, p. 238; Cox & Ham. Pr. Linn. Soc. N. S. W. (2) iv. p. 418 (1889).

Lathamus concinnus, Less. Tr. d'Orn. p. 206 (1831). Trichoglossus australis, Wagl. Mon. Psitt. p. 549 (1832); Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); G. R. Gr. Gen. B. ii. p. 411, n. 8 (1846); Blyth, Cat. B. Mus. A. S. B. p. 12 (1849); G. R. Gr.

List Psitt. Brit. Mus. p. 63 (1859).

Centrourus australis, G. R. Gr. List Gen. B. p. 51 (1840).

Glossopsitta australis, Bp. Rev. et May. de Zool. 1854, p. 157, n. 308; Souancé, Rev. et Mag. de Zool. 1856, p. 226; Bp. Naumannia, 1856, Consp. Psitt. n. 322; Gould, Handb. B. Austr. ii. p. 100 (1865); Ramsay, P. Z. S. 1875, p. 602; North, Descr. Cat. Nests § Fggs, p. 268 (1889).

Coriphilus australis, Schleg. Dierent. p. 77 (1864).

Nanodes australis, Schley. Mus. P.-B. Psittaci, p. 114 (1864); id. op. cit. Revue, p. 53 (1877).
(dossopsitta concinna, G. R. Gr. Hand-l. ii. p. 156, n. 8226 (1870);
Tristr. Cat. Coll. B. p. 74 (1889).

Glossopsittacus concinnus, Sund. Meth. Nat. Av. Disp. Tent. p. 71 (1872).

Trichoglossus (Glossopsitta) concinnus, Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 195, n. 508 (1878): id. Tab. List, p. 17, n. 522 (1888).

Glossopsitta concinnus, North, Pr. Linn. Soc. N. S. W. (2) iii.

p. 1778 (1888).

Adult male. Green; forehead, lores, and ear-coverts bright red; pileum more or less tinged with blue; cheeks with narrow lines of bright green; hind neck and upper part of the back olive-brown; sides of the breast yellow; inner webs of the lateral tail-feathers vellowish, with the base red: "bill blackish brown, passing into reddish orange at the tip;" feet dark: "iris buff, surrounded by a narrow eirele of yellow" (Gould). Total length 8.60 inches, wing 4.9, tail 3.50, bill 0.70, tarsus 0.51.

Female. Similar to the male, but with much less blue on the head. Hab. Australia, from Rockingham Bay to S. Australia, and Tasmania.

a. Ad. sk.	Australia.	Linnean Society.
b. Ad. st.	Australia.	A. Cunningham, Esq.
c. ♂ ad. sk.	S. Australia, 1841.	[P.]. Sir G. Grey [P.].
d. Ad. sk.	Australia.	Gould Coll.
e. Ad. sk.	River Darling, Nov. 1863.	Gould Coll.
f. Ad. sk.	New Holland,	Sir J. Mitchell [P.].
y. Ad. sk.	Cape Upstart, April 1843.	J. B. Jukes [P.].
h, i. Ad. sk.	Australia (J. T. Cockerell).	Salvin-Godman Coll.
k. Ad. sk.	Australia.	Tweeddale Coll.
l, m. Ad. sk.	Ashfield, July 1863.	Hume Coll.
n. Ad. st.	Tasmania.	R. Gunn, Esq. [P.].
o, p. Ad. sk.	Tasmania.	R. Gunn, Esq. [P.].
q, r. Ad. sk.	Tasmania.	Antarctic Exped.
s. Ad. var. sk.	Tasmania.	Antarctic Exped.
t, Ad. var. sk.	Tasmania	Purchased.
u. ∂ ad.; v, w, x. ♀	Tasmania.	C. G. H. Lloyd [P.].
ad. sk.		
y. Ad. sk.	Tasmania, April 1867.	Hume Coll.

## 4. Glossopsittacus porphyrocephalus.

Psittaens purpureus, Dietrichsen (nec Müll., Gm., Less.), Philos. Mag. xi, p. 387 (1832); Wagl. Mon. Psitt. p. 747 (1832); Thienem. Fortpfly. d. ges. Vög. p. 74 (1846).

Trichoglossus porphyrocephalus, Dietr. Trans. Linn. Soc. xvii. (part 4) p. 553 (1837\*); Gould, B. Austr. v. pl. 53 (pt. i., 1840); G. R.

<sup>\*</sup> The description was read March 20, 1832.

Gr. Gen. B. ii. p. 411, no. 12 (1846); Hartl. Erst. Nachtr. Verz. p. 15 (1844); Sturt, Exp. Centr. Austr. ii. App. p. 41 (1843); Relnb. Vöy. Neuholl. no. 176 (1850); Blyth, Cat. B. Mus. As. Soc. Beng. p. 12 (1849); G. R. Gr. List Psitt. Brit. Mus. p. 64 (1859); Finsch, Papag. ii. p. 862 (1868); Gieb. Thes. Orn. iii. p. 659 (1877); Relnw. Journ. f. Orn. 1881, p. 147 (Consp. Psitt. p. 83); Salvin, Cat. B. Strickl. Coll. p. 456 (1882); Relnw. Vogelbild. t. xxx. f. 1 (1883).

Psittacula florentis, Bourj. Perr. pl. 84 (1837–38).

Trichoglossus purpureus, Fraser, P. Z. S. 1839, p. 113; Licht. Nomencl.

Av. p. 72 (1854).

Glossopsitta porphyrocephala, Ep. Rev. et Mag. de Zool. 1854, p. 157,
n. 310; Souancé, Rev. et Mag. de Zool. 1856, p. 226; Bp. Naumannia, 1856, Consp. Psitt. no. 324; Gould, Handb. B. Austr. ii.
p. 102 (1865); G. R. Gr. Hand-list, ii. p. 156, no. 8228 (1870);
Tristr. Cat. Coll. B. p. 74 (1869).

Nanodes porphyrocephalus, Schleg. Mus. P.-B. Psittaci, p. 115 (1864);

· id. op. cit. Revue, p. 53 (1874).

Trichoglossus (Glossopsitta) porphyrocephalus, Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 195, no. 509 (1878); id. Tab. List, p. 17, no. 523 (1888).

Adult. Green, interscapular region olive: throat, breast, and middle of the abdomen bluish; forehead and ear-coverts yellow, intermingled with red; erown of head deep purple-blue; lores red; sides green, mixed with red; under tail-coverts yellowish green; bend of the wing light blue; under wing-coverts crimson; primaries blackish brown, margined externally with green; tail green above, with the inner web yellow, towards the base red; bill black; feet bluish; "iris brown, with a narrow ring of orange round the pupil" (Gould). Total length 6.75 inches, wing 4.20, tail 2.50, tarsus 0.39.

Hab. West and South Australia.

a, b. Ad. st. S. Australia. Gould Coll. Gould Coll. c. Ad. sk. S. Australia. W. Australia (J. T. Cockerell). d, e. Ad. sk. Salvin-Godman Coll. Sir G. Grey [P.]. Sir G. Grey [P.]. f. ♀ ad. st.y. Ad. sk. S. Australia. S. Australia. Tweeddale Coll. h. Ad. sk. S. Queensland. R. B. Sharpe, Esq. [P.]. i. Ad. sk. Swan River.

## 5. Glossopsittacus pusillus.

Psittacus pusillus, Shaw, in White's Journ. of a Voy. to New South Wales, p. 262, pl. 48 (1790); Lath. Ind. Orn. i. p. 106, no. 71 (1790); Shaw, Gen. Zool. viii. 2, p. 471 (1811); Bechst. Lath. Uebers. p. 82 (1811); Vieill. N. D. xxv. p. 376 (1817); Kuhl. Consp. Psitt. p. 47 (1820); Vieill. Enc. Méth. iii. p. 1407 (1823); Less. Voy. Coq., Zool. p. 630 (1828); Voigt, Cuv. Uebers. p. 735 (1831); Weinl. Journ. f. Orn. 1854, B. p. 1xxv.

Small Parrakeet, Lath. Gen. Syn. Suppl. ii. p. 88 (1802); id. Gen. Hist. ii. p. 194, with var. A (1822).

La Perruche à face rouge, Levaill. Perr. pl. 63 (1801).

Hahn, Orn. Atl., Papag. t. 36 (1835); Dubois, Orn. Gal. pl. 65 (1839).

Trichoglossus pusillus, Vig. & Horsf. Trans. Linn. Soc. xv. p. 293 (1826); Steph. Gen. Zool. xiv. 2, p. 130 (1826); Wayl. Mon. Psitt. p. 548 (1832); Gould, B. Austr. v. pl. 54 (pt. xiii., 1843); Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); G. R. Gr. Gen. B. ii. p. 411, no. 7 (1846); Thienem. Fortpflanz. d. ges. Vöy. p. 75 (1846); Blyth, Cut. B. Mus. A. S. B. p. 12 (1849); Rehnb. Vög. Neuholl. n. 175 (1850); G. R. Gr. List Psitt. Brit. Mus. p. 64 (1859); Finsch, Papag. ii. p. 800 (1868); Müll. P. Z. S. 1869, p. 279; Pelz. Ibis, 1873, p. 117; Gieb. Thes. Orn. iii. p. 659 (1877); Ramsay, Pr. Linn. Sec. N. S. W. ii. p. 195, no. 510 (1878); Forbes, P. Z. S. 1879, p. 170; Rehnw. Journ. f. Orn. 1881, p. 148 (Consp. Psitt. p. 84); Salvin, Cat. B. Strickl. Coll. p. 456 (1882); Rehnw Vogelbild.t. xxx. f. 2 (1883); Legge, Pr. R. Soc. Tasm. 1886, p. 238; Ramsay, Tab. List, p. 17, no. 524 (1888); Cox & Ham. Pr. Linn. Soc. N. S. W. (2) iv. p. 418 (1889).

Lathamus pusillus, Less. Tr. d'Orn. p. 206 (1831).

Glossopsitta pusilla, Bp. Rev. et Mag. de Zool. 1854, p. 157, n. 309; Souancé, Rev. et Mag. de Zool. 1856, p. 226; Bp. Naumannia, 1856, Consp. Psitt. n. 333; Gould, Handb. B. Austr. ii. p. 103 (1865); G. R. Gr. Hand-list, ii. p. 156, n. 8227 (1870); Ramsay, P. Z. S. 1875, p. 602; Tristr. Cat. Coll. B. p. 74 (1889); North, Pr. Linn. Soc. N. S. W. (2) iii. p. 1778 (1888); id. Descr. Cat. Nests & Eggs, p. 268 (1889).

Coriphilus pusillus, Schleg. Dierent. p. 78 (1864). Nanodes pusillus, Schleg. Mus. P.-B. Psittaci, p. 115 (1864); id. op. cit. Revue, p. 53 (1874).

Adult male. Green; face red; hind neck and interscapular region olive-brown; tail above green; inner webs of the lateral feathers fine red at the base, yellow towards the tip: bill black; feet brown; "iris orange, surrounded by a narrow line of yellow." Total length 6.60 inches, wing 4, tail 2.40, bill 0.45, tarsus 0.35.

Female. Similar to the male, but smaller and with the red on the face less extended.

Hab. Australia, from Rockingham Bay to South Australia, and Tasmania.

a. Ad. st.	Australia.	Australian Mus. [P.].
b. Ad. st.	Australia.	Purchased.
c, d. Ad. sk.	Australia.	Sir D. Cooper [P.].
e, f. Ad. sk.	Australia (J. T. Cockerell).	Salvin-Godman Coll.
g. $d$ ad. sk.	S. Australia.	Gould Coll.
$h$ . $\mathcal{J}$ ad. sk.	S. Australia.	Sir G. Grey [P.].
$i. \ \ $ ad. sk.	S. Australia, May.	Sir G. Grey [P.].
k. Ad. sk.	N. S. Wales.	Gould Coll.
<i>l, m.</i> Ad. sk.	Cape Upstart, April.	J. B. Jukes [P.].
u. Ad. sk.	Sydney.	Tweeddale Coll.
o. & ad. sk.	Ipswich, Sept.	Hume Coll.

#### 11. HYPOCHARMOSYNA.

Type. H. placens.

Range. From the Moluccas, through the Papuan Islands and New Hebrides, to the Fiji Islands.

## Key to the Species.

I. Inner web of the quills red . . . . . . wilhelminæ, p. 73. II. No red on the inner web of the quills. a. A yellow band on the underside of the quills. a'. Cheeks and throat red in the males. a". No red patch on the upper tail-coverts. placens, p. 74. subplacens, p. 75. b". A red patch on the upper tail-coverts. c'''. Red patch on the upper tail-coverts duller; the female with yellow streaks on the ear-coverts ..... rubronotata, p. 76. d'". Red patch on the upper tail-coverts brighter; the female with bright green streaks on the ear-coverts... kordoana, p. 77. b'. Only the upper part of the throat red . . . . rubrigularis, p. 77. b. No yellow band on the underside of the quills, which are entirely dusky. aureocineta, p. 78. c". Very little red round the base of the bill..... palmarum, p. 78. d''. No red round the base of the bill .... *pygmæa*, p. 79.

### 1. Hypocharmosyna wilhelminæ.

Trichoglossus wilhelminæ, Meyer, Journ. f. Orn. 1874, p. 56 (type examined); id. Sitzb. k. Ak. Wissensch. Wien, lxix. pp. 74, 100 (1874); Sclat. Ibis, 1874, p. 419; Meyer, Sitzb. Isis Dresd. 1875, p. 78; Rehnw. Journ. f. Orn. 1881, p. 151 (Consp. Psitt. p. 87); id. Vogelbild. t. xxix. f. 4 (1878–83).

Psitteuteles wilhelminæ, Gould, B. New Guin, pt. iii. pl. 6 (1876). Coriphilus wilhelminæ, Salvad. Ann. Mus. Civ. Gen. x. p. 36, sp. 84 (1872); id. Orn. Pap. e Mol. i. p. 302 (1880); Slarpe, Journ. Linn. Soc., Zool. xvi. p. 427 (1882); Salvad. Orn. Pap. e Mol. iii. p. 519 (1882); Guillem. P. Z. S. 1885, p. 623; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 174 (1889).

Adult male. Green, underparts lighter, crown tinged with purple; nape purple, with narrow blue feathers; lower back red, succeeded by a patch of purple, blending into green on the upper tail-coverts; breast with narrow streaks of yellow, each streak being margined with dark green; on the flanks a small patch of yellow; axillaries, under wing-coverts, and inner web of the quills red; middle tail-feathers green at the base, dark purple at the tip; the lateral tail-feathers red at the base, and with a dark purple band near the tip, which is green: bill yellow-red; feet dark grey; iris yellow. Total length 4.75 inches, wing 2.75, tail 2, bill 0.47, tarsus 0.38.

Adult female. Differs from the male in having no red on the lower back, which is green \*, no yellow spot on the flanks, and no red on the axillaries, under wing-coverts, and inner web of the quills, which are green. Total length 4.50 inches.

<sup>\*</sup> Dr. Meyer describes the lower back of the female as green, but in a specimen, apparently of that sex, in the British Museum collection from S.E. New Guinea the lower back is purple.

74 LORIIDÆ.

Hab. New Guinea, from Andai on the western coast of Geelvink Bay to the Astrolabe Mountains in the south-eastern part.

Astrolabe Mountains, S.E. New A. Goldie [C.]. a. 3 ad.; b, c. Imm. & sk.

d. ♀? ad. sk. S.E. New Guinea. H. O. Forbes, Esq.

### 2. Hypocharmosyna placens.

Psittacus placentis (!), Temm. Pl. Col. 553 (1835) (types examined); Less. Compl. de Buff., Ois. p. 606 (1838); Temm. Pl. Col. i. Tabl. Meth. p. 61 (1839); S. Müll. Verh. Land- en Volkenk. pp. 23, 107 (1839-44).

Conurus placens, Bourjot, Perr. pl. 46 ( $\beta$  et Q, ex Temm.) (1837–38). Psittacus (Trichoglossus) placentis, S. Müll. Verh. Land- en Volkenk.

p. 472 (1839–1844).

Coriphilus placentis, G. R. Gr. Gen. B. ii. p. 417, no. 7 (1845); id. P. Z. S. 1858, pp. 182, 194; id. Cut. B. New Guin. pp. 41, 59 (1859); id. List Psitt. Brit. Mus. p. 59 (1859); id. P. Z. S. 1860, p. 357, 1861, p. 436; Rosenb. Reis nuar de Zuidcostereil. pp. 48, 80, 87, 100 (1867).

Psitteuteles placens, Bp. Rev. et Mag. de Zool. 1854, p. 157, sp. 307; id. Naumannia, 1856, Consp. Psitt. sp. 321; Gould, B. of New Guin. pt. iii. pl. 7 (1876); Tristr. Cat. Coll. B. p. 74 (1889).

Trichoglossus placens, Sclat. Journ. Pr. Linn. Soc. ii. p. 164, sp. 105 (1858); id. P. Z. S. 1860, pp. 226, 227; Finsch, Papag. ii. p. 872 (1868); Meyer, Sitzb. k. Ak. Wissensch. Wien, Ixix. pp. 400, 401 (1874); id. Sitzb. Isis Dresd. p. 78 (1875); Rehnw. Journ. f. Orn. 1881, p. 150 (Consp. Psitt. p. 86); id. Vogelbild. t. xxix. f. 4 (1878-83); Meyer, Zeitseler, f. ges. Orn. i. p. 275 (1884). ? Trichoglossus versicolor (?), Wall. Ibis, 1861, p. 284 (Ceram).

Trichoglossus placentis, Rosenb. Journ. f. Orn. 1802, pp. 61, 62, 65, 67; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 140, 141, 142, 145 (1863).

Charmosyna placentis, Wall. P. Z. S. 1864, p. 292 (cum var. a et b),

p. 295.

Coriphilus placens, Schleg. Dierent. p. 78, with fig. (1864); Finsch, Neu-Guin. p. 158 (1865); Salvad. Ann. Mus. Civ. Gen. x. p. 36, sp. 85 (1877); D'Alb. e Salvad. Ann. Mus. Civ. Gen. xiv. p. 42 (1879); Salvad. Orn. Pap. e Mol. i. p. 303 (1880); Blas. P. Z. S. 1882, p. 702; Pleske, Bull. Acad. Pétersb. xxix. p. 524 (1884); Nehrk. Journ. f. Orn. 1885, p. 31; Guillem. P. Z. S. 1885, pp. 565, 623; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 174 (1889).

Nanodes placens, Schleg. Mus. P.-B. Psittaci, p. 113 (1864); id. Ned. Tijdschr. Dierk. iii. p. 336 (1866); id. Mus. P.-B. Psittaci, Revue, p. 50 (1874); Rosenb. Reist. nuar Geelvinkb. pp. 6, 113 (1875).

Psitteuteles placentis, G. R. Gr. Hand-list, ii. p. 157, sp. 8235 (1870). Charmosyna (?) placens, Salvad. Ann. Mus. Civ. Gen. vii. p. 760 (1875).

Charmosyna sp., D'Alb. Ann. Mus. Civ. Gen. ix. p. 9 (1877).

Very much like H. subplacens, from which it differs in having a

large blue spot on the uropygium.

Adult male. Green; crown yellow-green; underparts paler; cheeks, throat, sides of the breast, and under wing-coverts bright red; ear-coverts blue; a large patch of blue on the uropygium; a yellow band on the underside of the wing; tail green, the two middle feathers with the tip red, the lateral tail-feathers red at the base, with a black band in the middle and yellow tips; bill and feet coral-red; iris yellow. Total length 7 inches, wing 3.60, tail 3.20, bill 0.50, tarsus 0.40.

Adult femule. Upper parts, including the pileum, green; a blue patch on the propygium; cheeks, underparts, and under wing-coverts lighter green; ear-coverts with yellow streaks; tail as in the male.

Dimensions a little smaller than in the male.

Hab. The Western Papuan subregion—New Guinea from the Fly River to the western coast, Salwatty (?), Waigiou, Guebeh, Mysol, Aru and Kei Islands, Khoor, Poulo-Padjang, Goram, Ceram, Amboyna, Amblau, Buru (?), Halmahera, Batchian, Ternate.

a, b. ♂♀ ad. st.	New Guinea.	Purchased.
c. of ad. sk.	New Guinea.	Tweeddale Coll.
d. 3 ad. sk.	Probably Aru Islands.	Gould Coll.
e. 3 ad. sk.	Aru Islands (A. R. Wallace).	Tweeddale Coll.
$f-h$ . $\delta$ ad.; $i, k$ .	Batchian.	Wallace Coll.
♀ ad. sk.		
l. ♀ ad. sk.	Halmahera.	Wallace Coll.
m, n. 3 ad.; o,	Ceram.	Wallace Coll.
p. ♀ ad. sk.		
q. ♀ ad. sk.	Wahai ( <i>Hoedt</i> ).	Salvin-Godman Coll.
r̂. ♀ ad. sk.	Amboina (Hoedt).	Salvin-Godman Coll.

## 3. Hypocharmosyna subplacens.

Trichoglossus subplacens, Sciat. P. Z. S. 1876, p. 519, 1871, p. 108, 1878, p. 671; Ramsay, Pr. Linn. Soc. N.S.W. iii. p. 255 (1878), iv. p. 96 (1879); Finsch, P. Z. S. 1879, p. 12; Finsch, Ihis, 1881, p. 538; Rehnw. Journ. f. Orn. 1881, p. 150 (Consp. Psitt. p. 86); id. Vogelbild. in the text of pl. xxix. (1883); Sharpe, Journ. Linn. Soc., Zoology, xvi. p. 427 (1882); Finsch, Vög. der Südsee, p. 18 (1884); Finsch u. Meyer, Zeitschr. f. ges. Orn. 1886, p. 9.

Psitteuteles subplacens, Sclat. in litt.; Salvad. Ann. Mus. Civ. Gen. ix. p. 16 (1876); Gould, B. of New Guin. pt. v. pl. 10 (1877); Tristr. Cat. Coll. B. p. 74 (1889).

Coriphilus subplacens, Salvad. Ann. Mus. Civ. Gen. x. p. 36, sp. 86 (1877); id. Orn. Pup. e Mol. i. p. 310 (1880), iii. p. 519 (1882) (New Britain); Sclut. P. Z. S. 1883, p. 347 (Fead Island, east of New Ireland): Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 174 (1889).

Adult male. Green; pileum yellow-green, with the base of the feathers partly red; underparts yellowish green; cheeks, throat, sides of the breast, and under wing-coverts bright red; ear-coverts blue; a vellow band on the underside of the wing; tail green, the two middle tail-feathers with the tip red, the lateral tail-feathers red at the base, with a black band in the middle and yellow tips: "bill and feet coral-red: iris orange" (Layard). Total length 7 inches, wing 3.70, tail 3.10, bill 0.55, tarsus 0.40.

Adult female. Upper parts, including the pileum, green; cheeks, underparts, and under wing-coverts lighter green; ear-coverts with

vellow streaks; tail as in the male.

Hab. The Eastern Papuan subregion—S.E. New Guinea, New Britain, Duke of York Islands, and Fead Island.

Port Moresby, S.E. New A. Goldie [C.]. Guinea. Duke of York Isl. Duke of York Isl. (Rev. c. 3 ad. sk. Rev. G. Brown [C.].  $d, e. \ \mathcal{J} \ \mathcal{Q} \ \text{ad. sk.}$ Tweeddale Coll. G. Brown).Dake of York Isl., 17 f. 3 ad. sk. E. L. Layard, Esq. [C.]. July, 1879. Blanche Bay, New Britain, E. L. Layard, Esq.  $g. \ \$ 2 ad. sk. [C.]12 June, 1879. G. E. Richards, Esq. h. ♀ ad. sk. Blanche Bay, New Britain, [C.]. June. Fead Isl., Nov. i-r.  $\beta \subseteq ad$ . et Rev. G. Brown [C.]. juv. sk. s. Ad. sk. Purchased.

### 4. Hypocharmosyna rubronotata.

Coriphilus rubronotatus, Wall. P. Z. S. 1862, p. 165; id. Ann. & Mag. N. H. (3) xi. p. 57 (1863); Finsch, Neu-Guin. p. 158 (1865); Salvad. Ann. Mus. Civ. Gen. x. p. 36, n. 87 (1877); id. Orn. Pap. e Mol. i. p. 311 (1880); id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 174 (1889).

Charmosyna rubronotata, Wall. P. Z. S. 1864, pp. 293, 294.

Trichoglossus rubronotatus, Finsch, Papag. ii. p. 876 (1868); Meyer, Verh. z.-b. Gesellsch. Wien, xxiv. p. 38 (1874); id. Sitzb. k. Ak. Wissensch. Wien, lxix. p. 400 (1874); Sclat. Ibis, 1874, p. 418; Meyer, Sitzb. Isis Dresd. 1875, p. 78; Rchnw. Journ. f. Orn. 1881, p. 151 (Consp. Psitt. p. 87); id. Vogelbild. t. xxix. f. 1 (1878–83).

Psitteuteles rubronotatus, G. R. Gr. Hand-list, ii. p. 157, sp. 8237 (1870).

Nanodes rubronotatus, part., Schleg. Mus. P.-B. Psittaci, Revue, p. 51 (1874).

Adult male (type). Green, underneath yellowish green; forehead, sides of the breast, and under wing-coverts bright red; a patch of dull red on the upper tail-coverts; ear-coverts blue; underside of the wing with a yellow band; tail green, lateral tail-feathers red at the base of the inner web, with a black band about the middle, and yellow at the tip; bill red; feet dull red; iris yellow-red. Total length 6.6 inches, wing 3.3, tail 2.7, bill 0.5, tarsus 0.6.

length 6.6 inches, wing 3.3, tail 2.7, bill 0.5, tarsus 0.6.

Adult female. Like the male, but has no red on the forehead; the sides of the breast and the under wing-coverts yellowish green;

ear-coverts green, the upper ones with yellow streaks.

Young male. Like the female, but with the forehead, the sides of the breast, and under wing-coverts more or less mingled with red; ear-coverts with streaks partly bluish green and partly yellow.

Hab. Salwatty and Western New Guinea from Sorong to Rubi.

## 5. Hypocharmosyna kordoana.

Trichoglossus (Charmosvna) kordoanus, Meyer, Verh. z.-b. Gesellsch. Wien, xxiv. p. 38 (1874) (type examined); id. Sitzb. k. Ak. Wissensch. Wien, lxix. p. 74 (1874); Sclat. Ibis, 1874, p. 419; Meyer, Sitzb. Isis Dresd. 1875, p. 78.

Nanodes rubronotatus, part., Schleg. Mus. P.-B. Psittaci, Revue,

p. 51 (1874).

Charmosyna? kordoana, Salvad. Ann. Mus. Civ. Gen. vii. p. 912

(1878).

Coriphilus kordoanus, Salvad. Ann. Mus. Civ. Gen. x. p. 36, sp. 88 (1877); id. Orn. Pap. e Mol. i. p. 313 (1880); id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 174 (1889).

Psitteuteles rubronotatus, Gould, B. of New Gnin. pt. v. pl. x.\*

(1877).

Trichoglossus kordoanus, Rchnw. Journ. f. Orn. 1881, p. 151 (Consp. Psitt. p. 87); id. Vogelbild. in the text of pl. xxix. (1883).

Adult male. Very much like the male of H. rubronotata, but the red on the forehead and on the upper tail-coverts more extended and brighter; the red on the sides of the breast confined to the upper part of them. Total length 6.48 inches, wing 3.18, tail 2.75, bill 0.51, tarsus 0.43,

Adult female. Very much like the female of H. rubronotata, but the ear-coverts with bright green narrow streaks; the red spot on

the upper tail-coverts broader. Total length 6.1 inches.

Young male. Forehead pale red; ear-coverts green; sides of the breast searcely tinged with red.

Hab. Mysori Islands in Geelvink Bay.

a. ♀ ad. sk.

Kordo, Mysori?

Purchased.

## 6. Hypocharmosyna rubrigularis.

Trichoglossus rubrigularis, Sclat. P. Z. S. 1881, p. 451 (New Britain); Rchnw. Journ. f. Orn. 1881, p. 395 (Consp. Psitt. p. 228); Sclat. Ibis, 1882, p. 347; Rchnw. u. Schal. Journ. f. Orn. 1882, p. 118; Rchnw. ibid. p. 239; id. Vogelbild. Nachtr. 31 (1883).

Trichoglossus rufigularis, Kleinschmidt in litt.

Coriphilus (?) rubrigularis, Salvad. Ann. Mus. Civ. Gen. xviii. p. 419, n. 12 (1882); id. Orn. Pap. e Mol. iii. p. 520 (1882); id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 174 (1889).

Green, underneath paler and more yellowish; sides of the head bright green; upper part of the throat red; wings underneath brown, with a yellow cross band towards the base; tail green, with the tip of the feathers yellow, the four lateral tail-feathers red at the base of the inner web: "iris yellowish red; bill yellowish red with darker point; feet red" (Kleinschmidt). "Total length 6.7 inches, wing 3.4, tail 3.2" (Selater).

Hab. New Britain (Kleinschmidt).

<sup>\*</sup> The figure of the female certainly belongs to H. kordoana, and most likely also that of the male.

### 7. Hypocharmosyna aureocincta.

Trichoglossus aureocinctus, Layard, Ann. & Mag. N. H. (4) xvi. p. 344 (November 1875); id. Ibis, 1876, pp. 138, 141, 391; id. P. Z. S. 1876, p. 505; Rowl. Orn. Misc. i. p. 261, pl. 36 (1876); Finsch, Journ. Mus. Godeffr. Heft xii. p. 3, t. i, f. 1 (1876); Gieb. Thes. Orn. iii. p. 656 (1877); Rehnw. Vogelbild, t. xxi. f. 6 (1878-

83); id. Journ, f. Orn. 1881, p. 149 (Consp. Psitt. p. 85). Trichoglossus (Glossopsitta) amabilis, Ramsay, Pr. Linn. Soc. N. S. W.

i. p. 30 (26 July, 1875) (1877).

Coriphilus aureocinctus, Tristr. Cat. Coll. B. p. 74 (1889).

Adult. Green; lores, front part of the checks, throat, and thighs red; a narrow yellow band borders the red throat; tail-feathers vellow towards the tip, the three outer ones red at the base of the inner web and with a black band in the middle: "bill and feet red; iris dark buff" (Layard). Total length 7 inches, wing 3.9, tail 3, bill 0.55, tarsus 0.35.

Hab. Fiji Islands.

Taviuni, 22 July 1875 (Layard). Tweeddale Coll. c. 3 ad. sk. Taviuni, 1 Aug. 1875 (Layard). Tweeddale Coll. Tweeddale Coll. Taviuni, 2 Aug. 1875 (Layard).  $d, e. \ \beta \$  ad. sk.

### 8. Hypocharmosyna palmarum.

Palm Parrot, Lath. Syn. i. p. 253, n. 57 (1781); id. Gen. Hist. ii.

p. 193 (1822).

Psittacus palmarum, Gm. Syst. Nat. i. p. 329, n. 89 (1788); Lath. Ind. Orn. i. p. 105, n. 68 (1790); Shaw, Gen. Zool. viii. 2, p. 468 (1811); Bechst. Kurze Uch. p. 80 (1811); Vieill. N. D. xxv. p. 371 (1817); Kuhl, Consp. Psitt. p. 51 (1820); Vieill. Enc. Méth. iii. p. 1408 (1823); Forster, Icon. Incd. t. 48; id. Deser. An. p. 259 (1844); Licht. ibid. (note) (1844); Bp. Compt. Rend. xli. p. 1111 (1855).

Nanodes? palmarum, Steph. Gen. Zool. xiv. 2, p. 120 (1826).

Trichoglossus palmarum, Wagl. Mon. Psitt. p. 546 (1832); G. R. Gr. Gen. B. ii. p. 411, n. 11 (1846); id. List Psitt. Brit. Mus. p. 64 (1859); id. List B. Trop. Isl. p. 33 (1859); Finsch, Papag. ii. p. 868 (1868); G. R. Gr. Hand-list, ii. p. 156, n. 8229 (1870); Brenchley, Cruise of the Curaçoa, p. 384, pl. 16 (1873); Gieb. Thes. Orn. iii. p. 658 (1877); Layard, Ibis, 1874, pp. 274, 280, 1879, p. 485 (coral beaks and legs), 1880, pp. 292, 339 (= pygmæus), 1881, p. 172; Rehum, Japag. f. Orn. 1881, p. 149 (Coran. Psitt. p. 855), id. Rehnw. Journ. f. Orn. 1881, p. 149 (Consp. Psitt. p. 85); id. Vogelbild. Nachtr. n. 30 (1883).

Loriculus? palmarum, Bp. Rev. et Mag. de Zool. 1854, p. 243. Cyclopsitta? palmarum, Bp. Naumannia, 1856, Consp. Psitt., after

Coriphilus palmarum, Tristr. Cat. Coll. B. p. 74 (1889).

Adult. Green, interseapular region tinged with olive; underneath green-yellow, especially along the middle of the breast and abdomen; anterior part of the checks near the base of the bill and chin pale red; tail green, with the tip yellow: "bill red; feet dull

orange; iris bright orange" (Richards). Total length 7:50 inches, wing 3.7, tail 3.3, bill 0.5, tarsus 0.5.

Female. Very little red round the base of the bill.

Hab. New Hebrides.

a. Ad. sk. Cuming Coll. Aneiteum. Gould Coll. b. ♂ imm, sk. Tanna, Dec. (H.M.S. ' Herald'). Capt. G. E. Richards  $c, d. \not \subseteq ad. sk.$ Havanna Isl., April. [C.].

#### 9. Hypocharmosyna pygmæa.

Pygmy Parrakeet, Lath. Syn. i. 1, p. 256, n. 60 (Otaheite) (1781);

id. Gen. Hist. ii. p. 194 (1822).

Psittacus pygmæus, Gm. S. N. i. p. 330, n. 92 (1788); Lath. Ind. Orn. i. p. 106, n. 72 (1790); Shaw, Gen. Zool. viii. 2, p. 473 (1811); Bechst. Lath. Ueb. p. 82 (1811); Vieill. N. D. xxv. p. 377 (1817); Kuhl, Consp. Psitt. p. 100 (1820); Vieill. Enc. Méth. iii. p. 1408 (1823); Wagl. Mon. Psitt. p. 744 (1832).

(1823); Wayl. Mon. Psitt. p. 744 (1832).

Trichoglossus? pygmæus, Pelz. Sitzb. Ak, Wiss. Wien, xx. p. 165 (1856) (Mns. Vienna); G. R. Gr. List Psitt. Brit. Mus. p. 65 (1859); id. Cat. B. Trop. Isl. p. 33 (1859); Finsch, Papag. ii. p. 870 (1868); G. R. Gr. Hand-list, ii. p. 156, n. 8230 (1870); Pelz. Ibis, 1873, p. 31, pl. i.; Gieb. Thes. Orn. iii. p. 659 (1877); Layard, Ibis, 1880, p. 339 (= palmarum, ♀); Rchuw. Journ. f. Orn. 1881, p. 150 (Consp. Psitt. p. 86) (syn. emend.); id. Vogelbild. Nachtr. n. 32 (1883); Pelz. u. Lorenz, Ann. naturh. Hofmus. iii. p. 39 (1888).

Very much like H. palmarum (Gm.), but with no red at the base of the bill.

Hab. Unknown.

According to Mr. E. Layard, Latham's type, preserved in the Museum of Vienna, is most likely a female of H. palmarum, and I am much inclined to agree with him.

#### 12. CHARMOSYNOPSIS. Type. Charmosynopsis, Salvad. Ann. Mus. Civ. Gen. x. p. 37

(1877) ..... C. pulchella.

Range. New Guinea and Solomon Islands.

## Key to the Species.

I. No yellow collar round the base of the neck.... pulchella, p. 79.

II. A yellow collar round the base of the neck.... marguritæ, p. 81.

## 1. Charmosynopsis pulchella.

Charmosyna pulchella, G. R. Gr. List Psitt. Brit. Mus. p. 102 (1859); id. P. Z. S. 1859, p. 158; Sclat. P. Z. S. 1860, p. 227; G. R. Gr. P. Z. S. 1861, p. 436; Wall, P. Z. S. 1864, p. 292; Sclat. P. Z. S. 1873, p. 697; Salvad. e D'Alb. Ann. Mus. Civ. Gen. vii. p. 813 (1875); Gould, R. of New Guin. pt. iii. pl. 4 (1876); Tristr. Cat. Coll. B. p. 79 (1889).

Charmosyna pectoralis, Rosenb. Journ. f. Orn. 1862, p. 64; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 144, 233 (1863); id. Journ. f. Orn.

1864, p. 112, n. 4; id. Malay. Archip. p. 591 (1878-79)

Eos pulchella, Schley. Dierent. p. 69 (1864). Lorius pulchellus, Schley. Mus. P.-B. Psittaci, p. 130 (note) (1864).

Coriphilus pulchellus, Finsch, Neu-Guin. p. 158 (1865).

Trichoglossus pulchellus, Finsch, New-Orak, p. 196 (1809).

Trichoglossus pulchellus, Finsch, Papag, ii. p. 877 (1868); Meyer, Sitzb. k. Ak. Wissensch. Wien, Ixix. pp. 74, 77, 401 (1874); Sclat. Ibis, 1874, p. 417; Meyer, Sitzb. Isis Dresd. 1875, p. 78; Rowley, Orn. Misc. pt. iii. p. 147, pl. xvii. (1876); Finsch, Orn. Misc. pt. iii. p. 149 (1876); Rehnw. Journ. f. Orn. 1881, p. 152 (Charg. Paitt, p. 88); id Vecchild + xviv. f. 2 (1878, 83). (Consp. Psitt. p. 88); id. Vogelbild. t. xxix. f. 3 (1878-83); Ramsay, Pr. Linn. Soc. N.S. W. x. p. 244 (Mount Astrolabe) (1885).

Psitteuteles pulchellus, G. R. Gr. Hand-list, ii. p. 157, sp. 8236

Nanodes pulchellus, Schleg. (nec Vig. & Horsf.), Mus. P.-B. Psittaci,

Revue, p. 52 (1874).

Charmosynopsis pulchella, Salvad. Ann. Mus. Civ. Gen. x. p. 37, n. 90, p. 123 (1877); id. Orn. Pap. e Mol. i. p. 317 (1880); Sharpe, Journ, Linn. Soc., Zoology, xvi. p. 427 (1882); Salvad. Orn. Pap. e Mol. iii. p. 520 (1882); Guillem. P. Z. S. 1885, p. 624; Finsch u. Meyer, Zeitschr. f. ges. Orn. 1886, p. 9; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 174 (1889).

Adult male. Head, neck, and underpart of the body carmine; back, wings, and upper tail-coverts green; vertex purplish black; uropygium blackish on the middle, red on the sides; breast and flanks with narrow streaks of bright yellow; thighs dark green, with the edges of the feathers dark purple; under wing-coverts red; quills underneath black; eentral tail-feathers mostly carmine, with the base green and the tips yellowish; lateral feathers carmine, with the outer webs edged with green and the tips bright yellow: bill orange-red; feet orange; iris yellow. Total length 8 inches, wing 3.7, tail 3.8, bill 0.55, tarsus 0.4.

Female. Like the male, but the sides of the uropygium are

yellow.

Immature bird. Breast and nape mingled with green.

Hab. New Guinea.

Dorey, New Guinea. a, b. 3 ad. & Wallace Coll. imm. sk. Wallace Coll. (Type c. ♀ ad. sk. Dorey, New Guinea. of species.) New Guinea. Tweeddale Coll.  $d, e. \ \exists \ \$ ad. sk.  $f, g, \beta \neq ad. sk.$ Astrolabe Mts. A. Goldie, Esq. [C.].

### 2. Charmosynopsis margaritæ.

Charmosyna margarethæ, Tristr. Ibis, 1879, p. 442, pl. xii. id. Cat.

Coll. B. p. 74 (1889).

Charmosyna margaritæ, Salvad. Ibis, 1880, p. 130; Rehnw. Journ. f. Orn. 1881, p. 152 (Consp. Psitt. p. 88); Ramsay, Pr. Linn. Soc. N. S. W. vii. p. 34 (1882); Sharpe, Gould's B. New Guin. pt. xviii. pl. 2 (1884).

Charmosynopsis margaritæ, Salvad. Orn. Pap. e Mol. i. p. 319 (1880); id. Ann. Mus. Civ. Gen. xviii. p. 419, n. 13 (1882); id. Orn. Pap. e Mol. iii. p. 520 (1882); id. Mem. R. Ac. Sc. Tor. ser. 2, xl.

p. 175 (1889).

Trichoglossus (Charmosyne) margarithæ, Ramsay, Pr. Linn. Soc.

N. S. W. vi. p. 720 (1881) (3); Nature, xxv. p. 355 (1882). Trichoglossus margaritæ, Rohnw. Journ. f. Orn. 1881, p. 396 (Consp. Psitt. p. 228); id. Vogelbild. t. xxix. f. 7 (1878–83). Charmosyne margarethæ, Tristr. Ibis, 1882, p. 143.

Adult male. Head, neck, and underpart of the body carmine; back, wings, and upper tail-coverts green; vertex purplish black; the neck is divided from the back and from the breast by two collars, one black and another orange-yellow, this is broader on the breast; sides of the lower back crimson; across the breast a band of purplish black; longer under tail-coverts green; quills black underneath, with a slight tinge of olive-yellow towards the base of the inner webs; greater under wing-coverts blackish; axillaries and smaller under wing-coverts carmine; tail carmine, tipped with yellow, the lateral feathers externally edged with green: bill red; feet orange. Total length 7:50 inches, wing 4:25, tail 3:25, culmen 0.70, tarsus 0.40. (Tristram Coll.)

Female. Differs from the male in having the sides of the lower back orange-yellow, the middle of the rump and the upper tail-

coverts olive. (Tristram Coll.)

Hab. Ugi and San Cristoval, Solomon Islands.

#### 13. CHARMOSYNA.

Type. Charmosyna, Wagl. Mon. Psitt. p. 493 (1832)..... C. papuensis. Pyrrhodes, Sw. Class. B. ii. p. 304 (1837)..... C. papuensis. Charmosina (!), Bp. Consp. Av. i. p. 3 (1850). porpues =

Range. New Guinea.

## Key to the Species.

I. Middle tail-feathers green at the base. a. A patch of yellow on the sides of the breast.. papuensis, p. 82. b. No yellow patch on the sides of the breast.... stellæ, p. 83. II. Middle tail-feathers red, with no green at the josephina, p. 84.

G

### 1. Charmosyna papuensis.

Avis paradisiaca orientalis, Seba, Thes. i. t. 60, ff. 1, 2 (1734).

Pica paradisi spec., Klein, Hist. Av. Prodr. p. 64 (1750).

Le petit Lory Papou, Sonner. Voy. à la Nouv. Guin. p. 175, pl. 111 (1776).

Papouan Lory, Lath. Syn. i. p. 215, with varr. A, B, C (1781); id. Gen. Hist. ii. p. 128 (1822).

Psittacus papou (!), Scop. Del. Flor. et Faun. Insubr. p. 86, n. 18

(1786) (ex Sonnerat).

Psittacus papuensis,  $Gm. S. N. i. p. 317, n. 57, with varr. <math>\beta$ ,  $\gamma$ ,  $\delta$  (1788); Lath. Ind. Orn. i. p. 88, n. 20, with varr. β, γ, δ (1750); Bechst. Kurze Uebers, p. 69 (1811); Shaw, Gen. Zool. viii. p. 440, pl. 63 (1811); Vieill. N. D. xxv. p. 336 (1817); Kuhl, Consp. Psitt. p. 43 (1820); Vieill. Enc. Méth. p. 1379, pl. 222. f. 1 (1823); Less. Voy. Coq., Zool. i. p. 630 (1828); Voiyt, Cuv. Uebers. p. 83 (1831); Less. Compl. de Buff., Ois. 2nd ed. p. 606 (1838); S. Müll. Verh. Landen Volkenk. p. 107 (1839-44).

Psittacus omnicolor, Licht. Cat. rer. nat. rariss. Hamb. p. 5, n. 48

(1793); Meyer, Zool. An. i. p. 140.

La Perruche Lori papou, Levaill. Perr. pl. 77 (1801).

Psittacus lichtensteinii, Bechst. Kurze Uebers. p. 83 (1811-12); Kuhl, Consp. Psitt. p. 36 (1820).

Palæornis papuensis, Vig. Zool. Journ. ii. p. 56 (1825); Steph. Gen. Zool, xiv. I, p. 129 (1826).

Lorius papuensis, Less. Tr. d'Orn. p. 195 (1831); Schleg. Mus. P.-B. Psittaci, p. 130 (1864); id. Ned. Tijdschr. Dierk. iv. p. 37 (1871).

Charmosyna papuensis, Wagl. Mon. Psitt. p. 555 (1832); Selb. Nat. Libr. vi. Parrots, p. 149, pl. 19 (1836); Wall. Ann. & Mag. N. H. (3) iii. p. 148 (1859); G. R. Gr. Cat. B. New Guin. p. 39 (1859); id. Cat. B. Trop. Isl. p. 31 (1859); id. List Psitt. Brit. Mus. p. 48 (1859); Rosenb. Journ. f. Orn. 1862, p. 64; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 143, 223 (1863); id. Journ. f. Orn. Neu-Guin. p. 157 (1865); G. R. Gr. Hand-list, ii. p. 157, sp. 8238 (1870); Sundev. Meth. nat. Av. disp. Tent. p. 72 (1872); Sclat. P. Z. S. 1873, p. 697; Rosenb. Reist. naar Geelvinkb. pp. 98, 102 (1875); Salvad. Ann. Mus. Civ. Gen. viii. p. 760 (1875); Gould, B. of New Guin. pt. ii. pl. 1 (1876); Salvad. Ann. Mus. Civ. Gen. x. p. 37, n. 91, p. 123 (1877); id. Orn. Pap. e Mol. i. p. 320 (1880); Guillem. P. Z. S. 1885, p. 684; Tristr. Cat. Coll. B. p. 74 (1889); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 175 (1889).

Pyrrhodes papuensis, Sw. Class. B. ii. p. 304 (1837). Psittacus (Belocercus) papuensis, S. Müll. Verh. Land- en Volkenk.

p. 471 (1839–44).

Charmosyna papua, G. R. Gr. Gen. B. ii. p. 416 (1845); id. P. Z. S. 1858, p. 194; id. Cat. B. New Guin. p. 59 (1859); id. P. Z. S. 1861, p. 436.

Charmosina (!) papuensis, Bp. Consp. Av. i. p. 3 (1850); id. Rev. et May. de Zool. 1854, p. 156, sp. 293; id. Naumannia, 1856, Consp.

Psitt. sp. 307.

Charmosyna papuana, Scl. Journ. Pr. Linn. Soc. ii. p. 165, n. 106 (1858); id. P. Z. S. 1860, p. 227; Wall. P. Z. S. 1862, p. 159; id. Ann. & Mag. N. H. (3) x. p. 470 (1862).

Eos papuensis, Schley. Dierent. p. 69 (1864).

Trichoglossus papuensis, Finsch, Papag. ii. p. 878 (1868); Meyer,

Journ. f. Orn. 1874, p. 55; id. Sitzb. Isis Dresd. 1875, p. 78; Rchnw. Journ. f. Orn. 1881, p. 152 (Consp. Psitt. p. 88); id. Vogelbild. t. xxix. f. 5 (1878–83).

Nanodes papuensis, Schleg. Mus. P.-B. Psittaci, Revue, p. 53 (1874). Lorius papuanus, Rosenb. Reist. naar Geelvinkb. pp. 113, 114 (1875).

Adult male. Carmine; back and wings dark green; vertex with a blue cross band and another black one behind; a black band also on the nape; rump red on the sides, blue along the middle; the longer upper tail-coverts green; sides of the breast and flanks yellow; middle of the abdomen and thighs black; under wing-coverts red; quills black underneath; middle tail-feathers dark green, yellowish red towards the tip; lateral tail-feathers yellow at the tip, red at the base of the inner web, and green on the outer edge: bill orange-red; feet orange; iris yellow. Total length from 16.9 to 14.93 inches, wing 5.3, tail from 10.6 to 8.23, bill 0.65, tarsus 0.51.

Female. The red feathers on the sides of the rump have the base vellow; a yellow-orange patch over the yellow spot above the

Young. The red feathers of the neck and breast have narrow black edges; the spot on the occiput, the abdomen, and the thighs dark green.

Hab. N.W. New Guinea.

a. Sk. (native).	New Guinea.	Laugier Coll.
b. Sk. (native).	New Guinea.	Turner Coll.
c. Sk. (native).	New Guinea.	Purchased.
d. ♀ ad. sk.	New Guinea.	Tweeddale Coll.

#### 2. Charmosyna stellæ.

Charmosyna josephinæ, Sharpe (nec Finsch), Journ. Linn. Soc., Zool. xvi. p. 428 (1882) (Morocco district); Salvad, Orn. Pap. e Mol. iii. p. 520 (partim) (1882); ? Ramsay, Pr. Linn. Soc. N. S. W. ser. 2, ii. p. 250 (1887) (Astrolabe Mountains, Goldie).

Trichoglossus papuana (sic) et Trichoglossus josephinæ, Ramsay (nec Finsch), Pr. Linn. Soc. N. S. W. x. p. 244 (1885).

Charmosyna stellæ, Meyer, Zeitschr. f. ges. Orn. 1886, p. 9, Taf. ii.; Sharpe, Nature, xxxiv. p. 340 (1886); id. Gould's B. New Guin. pt. xxiv. pl. 4 (1888); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 175 (1889).

Adult male. Carmine, back and wings dark green; a patch of long lilac-blue feathers on the occiput, nape black; a patch of blue and dull purple on the rump; lower breast, sides of the abdomen, and thighs purple-black; on the flanks a few white streaks surrounded with blue; middle of the abdomen, under tail-coverts, and under wing-coverts crimson; tail-feathers dark green, the two middle ones passing into red-orange and thence into yellow at the tips, the lateral tail-feathers yellow towards the tips and with the base of the inner web crimson: bill red; feet orange. Total length

15.5 inches, wing 5.6, tail (longest feathers) 10.4, bill 0.8, tarsus 0.55.

Female. Lower back and sides of the rump bright yellow, sur-

rounded below with green.

Young male. The crimson feathers of the neck and breast margined with purplish; abdomen and thighs more or less green and blue; back yellow, more or less red.

Hab. S.E. New Guinea.

 $a, b. \ \beta$  ad.,  $\beta$ <br/>imm. sk.<br/> $c, d. \ \delta \ \emptyset$  imm.<br/>sk.<br/> $e, f. \ \delta \ \emptyset$  ad. native sk.Mount Owen Stanley.<br/>Astrolabe Mountains.<br/>Astrolabe Mountains.C. Hunstein [C.].<br/>Hon. H. Romilly [P.].<br/>A. Goldie, Esq. [C.].

### 3. Charmosyna josephinæ.

Trichoglossus josephinæ, Finsch, Atti Soc. Ital. Sc. Nat. xv. p. 427, tav. 7 (♀) (1873); Meyer, Journ. f. Orn. 1874, p. 55; id. Sitzb. k. Ak. Wissensch. Wien, 1xix. pp. 74, 76, 401 (1874); id. Sitzb. Isis Dresd. 1875, p. 78; Rosenb. Malay. Arch. p. 591 (1878-79); Rchnw. Journ. f. Orn. 1881, p. 153 (Consp. Psitt. p. 89); id. Vogelbild. t. xxix. f. 6 (1878-83).

Charmosyna josephinæ, Gould, B. of New Guin. pt. iii. pl. 3 (1876);
Salvad. Ann. Mus. Civ. Gen. x. p. 37, n. 92 (1877); Meyer, Vogelskelett. p. 1, Taf. ii. (1879); Salvad. Orn. Pap. e Mol. i. p. 325 (1880);
Guillem. P. Z. S. 1885, p. 624; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 176 (1889); Tristr. Cat. Coll. B. p. 74 (1889).

Adult male. Carmine; back and wings green; on the occiput a large spot dark purple-blue, becoming black lower down; a spot on the middle of the upper tail-coverts dull blue; middle of the abdomen and thighs purple-black; above the thighs some yellow streaks; tail-feathers red, with the tip yellow, the lateral ones more or less dull green in the middle: bill red; feet and iris orange. Total length 10·22 inches, wing 4·9, tail 4·7, bill 0·72, tarsus 0·55.

Female. Rump and flanks next to the rump yellow.

Hab. N.W. New Guinea.

#### 14. OREOPSITTACUS.

Type.

Oreopsittacus, Salvad. Ann. Mus. Civ. Gen. x. p. 37 (1877). O. arfaki. Range. Arfak Mountains, New Guinea.

## 1. Oreopsittacus arfaki.

Trichoglossus (Charmosyna) arfaki, Meyer, Verh. z.-b. Gesellsch.
Wien, xxiv. p. 37 (1874) (type examined).
Trichoglossus arfaki, Meyer, Sitzb. k. Ak. Wissensch. Wien, lxix.

p. 74 (1874); Sclat. Ibis, 1874, p. 419; Rowl. Orn. Miscell. pt. iii. p. 145, pl. xvi. (3 juv.) (1876); Finsch, Orn. Miscell. pt. iii. p. 147 (1876); Rehnw. Journ. f. Orn. 1881, p. 154 (Consp. Psitt. p. 90); id. Vogelbild. t. xxix. f. 2 (1878-83).

Charmosyna arfaki, Becc. Ann. Mus. Civ. Gen. vii. p. 715 (1875). Psittenteles arfaki, Gould, B. of New Guin. pt. iii. pl. 5 (1876).

Oreopsittacus arfaki, Salvad. Ann. Mus. Civ. Gen. x. p. 37, sp. 89 (1877); id. Orn. Pap. e Mol. i. p. 315 (1880); Guillem. P. Z. S. 1885, p. 624; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 174 (1889).

Adult male. Dark green; pileum, sides, and under wing-coverts red; cheeks and ear-coverts dark blue, with a line of white-bluish dots; middle of the abdomen tinged with red; under tail-coverts yellowish green; primaries edged with blue; underside of the wing with a yellow band; tail-feathers black, with the base above green and with the tips red; bill black; feet plumbeous; iris dark brown. Total length 6 inches, wing 3.05, tail 3.60, bill 0.45, tarsus 0.35.

Female. Like the male, only the pileum is not red, but entirely green like the back.

Young male. The pileum is more or less mingled with red.

Hab. Arfak Mountains, New Guinea.

a. ♂ ad. sk.
 b. ♀ ad. sk.

Arfak Mountains (Laglaize). Arfak Mountains (Bruijn). Purchased. Purchased.

# Family III, CYCLOPSITTACIDÆ.

Bill moderately or much swollen on the sides; upper mandible notched, without transverse ridges on the under surface of the hook; lower mandible with the gonys upright and flattened in front; cere naked round the exposed nostrils, or feathered and nostrils hidden (tongue not known); tail moderate and graduated, or short and cuneate, or rounded.

Range. Austro-Malayan subregion.

### Key to the Genera.

- I. Bill yellow-orange, moderately swollen on the sides; under mandible moderately broad, with the gonys flattened in front, smooth, and with no distinct ridges; nostrils exposed .......
- II. Bill black or dark horn-colour, much swollen on the sides; gonys broadly flattened in front, and with several distinct ridges and grooves; nostrils exposed, or hidden when the cere is feathered ..... 2. Cyclopsittacus, p. 88.
- 1. Neopsittacus, p. 86.

muschenbroeki, p. 86.

#### 1. NEOPSITTACUS.

Type.

Neopsittacus, Salvad. Ann. Mus. Civ. Gen. vii. p. 761 (1875) ...... N. muschenbroeki,

Range. New Guinea and Timor.

## Key to the Species.

- I. Inner web of the quills towards the base
- II. Inner web of the quills with no red at the
  - a. Hind part of the pileum purple-blue.... iris, p. 87.
  - b. Pileum entirely red..... rubripileum, p. 88.

## 1. Neopsittacus muschenbroeki.

Nanodes muscenbroekii, Rosenb. in litt.; Schleg. Ned. Tijdschr. Dierk. iv. p. 34 (1871) (type examined); id. Mus. P.-B. Psittaci, Revue, p. 52 (1874); Rosenb. Reist. naar Geelvinkb. pp. 102, 113, 137

(1875); id. Malay. Archip. p. 591 (1871-79).

Trichoglossus muschenbrockii, Sclat. P. Z. S. 1873, p. 697; Meyer, Sitzb. Isis Dresd. 1875, p. 78; Finsch, P. Z. S. 1875, p. 641; id. Rowley's Orn. Misc. ii. p. 61, pl. 44 (1876); Gould, B. New Guin. pt. v. pl. 8 (1877); Rchnw. Journ. f. Orn. 1881, p. 154 (Consp. Psitt.

p. 90); id. Vogelbild. t. xxix. f. 8 (1878-83); Ramsay, Pr. Linn.

Soc. N. S. W. x. p. 244 (Mount Astrolabe) (1885).

Neopsittacus muschenbroeki, Salvad. Ann. Mus. Civ. Gen. vii. p. 761 (1875), x. p. 36, n. 83, p. 123 (1878); id. Orn. Pap. e Mol. i. p. 300 (1880); Guillem. P. Z. S. 1885, p. 623; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 173 (1889).

Adult. Green; crown, occiput, and nape olive-brown, with yellowish streaks; bright yellow-green streaks on the cheeks; breast, middle of the abdomen, under wing-coverts, and inner web of the quills towards the base red; sides and under tail-coverts yellowish green, the last are tinged with red on the outer web; tail above green, underneath yellow, with the base of the inner web of the lateral tail-feathers red: bill orange-yellow; feet dark; iris yel-Total length 8.50 inches, wing 4.20, tail 4, culmen 0.58, tarsus 0.50.

Female. Like the male.

Young. Breast green mingled with red.

Hab. New Guinea: the Arfak Mountains and the Astrolabe Mountains (Ramsay).

*a, b.* ♂ ad. sk. c. Ad. sk.

New Guinea. Arfak Mountains. Tweeddale Coll. Furchased.

# 2. Neopsittacus iris.

Psittacus iris, Temm. Pl. Col. 567 (livr. 96, 1835); id. Tabl. Méth. p. 61 (1839); Müll. & Schleg. Verh. Land- en Volkenk. p. 209 (1839-44).

Conurus iris, *Bourj. Perr.* pl. 44 (1837–38).

Psittacus (Trichoglossus) iris, Müll. & Schleg. Verh. Land- en Volkenk.

p. 472 (1839-44).

Coriphilus iris, G. R. Gr. Gen. B. ii. p. 417, no. 9 (1845); id. List Psitt. Brit. Mus. p. 59 (1859); Schleg. Dierent. p. 78 (1864).

Psitteuteles iris, Bp. Rev. et Mag. de Zool. 1854, p. 157, n. 305; id. Naumannia, 1856, Consp. Psitt. n. 320; G. R. Gr. Hand-list, ii. p. 157, n. 8234 (1870).

Psittacus (Belocercus!) iris, Rosenb. Journ. f. Orn. 1862, p. 66; id.

Nat. Tijdschr. Ned. Ind. xxv. p. 146 (1863).
Trichoglossus iris, Sclat. P. Z. S. 1860, p. 226; Finsch, Neu-Guin.
p. 158 (1865); id. Papag. ii. p. 852 (1868); Gieb. Thes. Orn. iii, p. 657 (1877).

Nanodes iris, Schleg. Mus. P.-B. Psittaci, p. 116 (1864); id. op. cit., Revue, p. 53 (1874).

Adult. Green; underneath vellowish green; breast with narrow bands on the edges of the feathers; pileum red, with its hinder part more or less purple-blue; eheeks green; ear-coverts purple; chin reddish; a yellow band on the nape; under wing-coverts yellowish green; quills underneath brwon; tail underneath yellowish green: bill yellow; feet dark. Total length 7:70 inches, wing 4:70, tail 3.20, bill 0.61, tarsus 0.50,

Hab. Timor.

a. Ad. st. b. Imm. st.

Timor. Timor.

Zoological Society [P.].

# 3. Neopsittacus rubripileum.

Trichoglossus iris, Wall. (nec Temm.) Ilis, 1861, p. 349; id. P. Z. 8. 1863, p. 484, 1864, pp. 292, 295; Finsch, Papag. ii. p. 852 (part.) (1868); Rehnw. Journ. f. Orn. 1881, p. 155 (Consp. Psitt. p. 91); id. Vogelbild. t. xxx. f. 7 (1883).

Nanodes iris (part.) Schleg. Mus. P.-B. Psittaci, p. 116 (1864); id. op. cit., Revue, p. 53 (1874).

Adult. Differs from N. iris in having the pileum entirely red, with no purple-blue on its hinder part.

Young. On the occiput the red colour is mixed with green. Hab. E. Timor.

a. Ad. sk.

E. Timor (Wallace).

Gould Coll. (Type of species.)
Wallace Coll.

b-d. ♂ ♀ ad. et juv. sk.

E. Timor.

#### 2. CYCLOPSITTACUS.

Туре.

Range. The Papuan Islands and North-eastern Australia.

# Key to the Species.

 Feathers of the cheeks and ear-coverts very long and narrow.

a. No black crescent-like band on the nape; no blue band on the breast; breast red in the male, with a pale greenish band in the female.

salvadorii, p. 89.

the female.....b. Nape with a black crescent-like band; a deep blue pectoral band; breast and middle of the abdomen red in the male, green stained with orange in the female.

edwardsi, p. 90.

II. Feathers of the cheeks and ear-coverts not very long and narrow.

c. Middle tail-feathers distinctly pointed.
 a'. Larger: wing about 4'3 inches; pectoral band blue; sides of the breast

pale blue.

a". Subocular spot blue.

a". Cheeks yellowish green; a blue spot on the occiput; subocular blue spot broader and brighter...

b". Cheeks golden yellow; generally no blue spot on the occiput; sub-ocular blue spot smaller and paler.....

desmaresti, p. 91.

occidentalis, p. 92.

b''. No subocular blue spot. c'''. Pectoral band pale blue; below this a second band brown-orange; hind neck green ..... blythi, p. 93. d'". Pectoral band deep blue; a yellow collar on the hind neck of the adult bird, and a blue one in the young bird..... cervicalis, p. 93. b'. Smaller: wing under 4 inches; no pectoral band; sides of the breast yellow; a red concealed spot on the inner web of the inner greater wing-coverts. c". Red on the pileum confined to the forehead. e'''. Larger: wing 3.9 inches; frontal feathers red tipped with green, a few of the median ones bluish ... coxeni, p. 94. f". Smaller: wing 3.5 inches; a broad patch of red on the middle of the forehead; a broad red band across the cheeks in the male; female without red on the cheeks, which are grey tinged with blue ..... maccoyi, p. 95. d". Sinciput and cheeks red.  $g^{\prime\prime\prime}$ . Red colour of the sinciput darker and bordered behind with vellow; middle of the cheeks buffgrey in the female ...... diophthalmus, p. 95. h'". Red colour of the sinciput paler, without distinct yellow border behind; female without red whatever on the head, having the sinciput blue, and the cheeks dull grey, slightly tinged with blue..

d. Middle tail-feathers not pointed; tail rather short; a concealed yellow spot on arnensis, p. 97. the inner web of the inner greater wingcoverts; breast orange in the male, greenish orange in the female. c'. Sinciput blue. e''. Quills underneath with no distinct yellow bases..... guglielmi III., p. 98. f". Quills underneath with very distinct pale yellow bases ...... suavissimus, p. 98. d'. Sinciput brown-black. g''. Smaller; inner web of the quills edged with yellow ..... melanogenys, p. 99. h". Larger; inner web of the quills en-

### 1. Cyclopsittacus salvadorii.

tirely black .....

Cyclopsittacus salvadorii, Oust. Bull. Assoc. Sc. France, 1880, p. 172;
Meyer, Journ. f. Orn. 1880, p. 312 (note); id. Ibis, 1881, p. 165;
Rehnw. & Schal. Journ. f. Orn. 1881, p. 79; Salvad. Ibis, 1881,
p. 287; Rehnw. Journ. f. Orn. 1881, pp. 136, 137 (Consp. Psitt.
pp. 72, 73); Salvad. Atti R. Ac. Sc. Tor. xvii. p. 593 (1882);

nigrifrons, p. 100.

Oust. Ann. Sc. Nat., Zoologie, sér. 6, xiii. art. n. 8, p. 11 (1882); Salvad. Ann. Mus. Civ. Gen. xviii. p. 418, n. 5 (1882); id. Orn. Pap. e Mol. iii. p. 515 (1882); Rehnw. Vogelbild. Nachtr. 19 (1883); Oust. Nouv. Arch. Mus. ser. 2, viii. p. 301, pl. 12 (3 2) (1884); Meyer, Zeitschr. f. ges. Orn. iii. p. 32 (1886); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 161 (1889); Meyer, Ibis, 1890, p. 412.

Adult male. Green; underneath paler and yellowish; forchead bluish green; nape and cheeks golden yellow; the feathers of the cheeks very narrow and long; a blue spot behind the eyes; breast red: bill blackish; feet greenish black. Total length 8.7 inches,

wing 4.6, tail 3.6, bill 0.75 (from Oustalet).

Adult female. Green, upper parts darker, underparts paler and more yellowish; pileum grass-green streaked with blue; feathers of the cheeks yellowish, very long and narrow; a spot behind the eyes blue; hind part of the neek yellowish green; breast with a broad pale greenish band; sides of the breast linged with orangebrown; wings bluish green, above like the back; quills yellow on the inner webs; the innermost greater wing-coverts near the back with a concealed orange spot on the inner webs; under wing-coverts pale green; tail rather long, above bluish green, below olive; bill black; feet, in the dry skin, lead-colour.

Young. Duller than the adult male; breast bluish, spotted with

red. (Oustalet.)

 $\it Hab.$  New Guinea, on the eastern coast of Geelvink Bay, between  $136^{\circ}~30'$  and  $140^{\circ}$  E. long.

# 2. Cyclopsittacus edwardsi.

Cyclopsittacus edwardsii, Oust. Ann. Sc. Nat., Zool. 1885, art. no. 3,
p. 1; Meyer, Zeitschr. ges. Orn. iii. p. 32 (1886); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 161 (1889); Meyer, Ibis, 1890, p. 412; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xli. p. 217 (1891).

Adult male. Green; a pectoral band deep blue; breast and middle of the abdomen red; cheeks golden yellow, tinged with red and blue; forehead and abdomen golden yellow; pileum light green; a black cross band on the nape; upper back green: the innermost greater wing-coverts with red and yellow concealed spots on the inner webs; primaries black, on the outer web edged with greenish blue, towards the tips edged with yellow; quills underneath brown, towards the base sulphur-yellow; under wing-coverts greenish blue; sides green: feet and bill blackish. Total length 7·1 inches, wing 4·5, tail 3·95. (Oustalet.)

Adult female. Green; forehead, lores, and crown yellowish grass-green; occiput greyish, encircled behind by a broad black band; cheeks and throat covered with very long and narrow red feathers; ear-coverts very long and narrow like the cheek-feathers; anterior ear-coverts yellow, median ones red, and the posterior turquoise-blue; a broad pectoral band blue; breast, abdomen, and under tail-coverts yellowish green, some feathers of the breast stained with

red on the edges; wings green; primaries bluish green on the outer webs; quills underneath blackish, but sulphur-yellow towards the base; axillaries and under wing-coverts pale verditer-green; tail above green, underneath olive: bill lead-colour; feet dusky; "irides brown" (Hunstein). Total length 7 inches, wing 4.3, tail 2.2, bill 0.75, tarsus 0.5.

Hab. North-east of New Guinea, from Kafu to Finsch and Con-

stantine Harbour.

a. ♀ ad. sk.

Finsch Harbour (C. Hunstein).

Purchased.

# 3. Cyclopsittacus desmaresti.

Psittacus desmarestii, Garn. Voy. Coq., Zool. i. p. 600, pl. 35 (1828);
Less. Man. d'Orn. ii. p. 149 (1828);
S. Müll. Verh. Land- en Volkenk. pp. 22, 107 (1839-44);
G. R. Gr. P. Z. S. 1858, p. 195.

Psittacula desmarestii, Less. et Garn. Voy. Coq., Zool. i. p. 628 (1828); Less. Tr. d'Orn. p. 204 (1831); Voigt, Cur. Uebers. p. 748 (1831); Wagl. Mon. Psitt. p. 629 (1832); Bowrjot, Perr. pl. 85 (1837-38); Less. Compl. de Buff. Ois. 2nd ed. p. 607 (1838); G. R. Gr. Gen. B. ii. p. 423, n. 18 (1846); id. List Psitt. Brit. Mus. p. 90 (1859); id. Cat. B. New Guin. pp. 42, 60 (partim) (1859); id. P. Z. S. 1859, p. 159, 1861, p. 437 (partim); Schleg. Mus. P.-B. Psittaci, p. 75 (partim) (1864); Finsch, Papag. ii. pp. 620, 957 (partim) (1868); Schleg. Mus. P.-B. Psittaci, Revue, p. 32 (partim) (1874); Meyer, Sitzh. Isis Dresd. 1875, p. 77; Gieb. Thes. Orn. iii. p. 327 (partim) (1876).

Cyclopsitta desmarestii, Bp. Rev. et Mag. de Zool. 1854, p. 154, sp. 219; id. Naumannia, 1856, Consp. Psitt. sp. 230; Sclat. Journ. Pr. Linn. Soc. ii. p. 166, sp. 117 (partim) (1858); Wall. Ibis, 1859, p. 210; id. P. Z. S. 1864, p. 284; Finsch, Neu-Guin. p. 158 (partim) (1865); G. R. Gr. Hand-list, ii. p. 168, sp. 8373 (1870).

Opopsitta desmarestii, Sclat. P. Z. S. 1860, p. 227; Rosenb. Journ, f. Orn. 1862, p. 64; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 144, 226 (1863); id. Journ. f. Orn. 1864, p. 115, n. 29; Sclat. P. Z. S.

1873, p. 697.

Cyclopsittacus desmarestii, Sund. Meth. nat. Av. disp. Tent. p. 69 (1872); Salvad. Ann. Mus. Civ. Gen. vii. p. 754 (partim), p. 911 (1875), viii. p. 397 (1876), x. p. 27, n. 24 (1877); id. Orn. Pap. e Mol. i. p. 150 (1880); Rehnw. Journ. f. Orn. 1881, p. 137 (Consp. Psitt. p. 73); id. Vogelbild. Nachtr. 20 (1883); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 160 (1889); Tristr. Cat. Coll. B. p. 78 (1889).

Adult male. Green, darker above, paler, yellowish green below; pileum orange, changing into orange-vermilion on the forehead; cheeks and ear-coverts green washed with golden; a spot below the eyes and another, nearly concealed, on the occiput bright blue; throat green, two cross pectoral bands, one light blue, and the other orange-brown; sides of the breast pale blue; rump and upper tail-coverts olive-green; primary-coverts and outer webs of the primaries towards the base bluish green; a narrow yellow edge towards the tip of the outer webs of the primaries; quills underneath brown with the bases yellow; under wing-coverts pale green;

a concealed orange spot on the inner webs of the innermost greater wing-coverts; tail olive-green above, olive below: irides pale yellow; bill black; feet lead-colour. Total length 8.7 inches, wing 4.2, tail 2.4, bill 0.78, tarsus 0.6.

Adult female. Like the male.

Young. Like the adult bird, but the pileum dull yellow.

Hab. New Guinea, near Dorey.

c. Ad. sk.  $d, e. \ \beta \ \ \text{ad. sk.}$   $f, g. \ \beta \ \ \ \ \text{ad. sk.}$  Dorey. Dorey (A. R. Wallace). New Guinea (A. B. Meyer). Amberbaki, N. G. (Laglaize).

Wallace Coll. Gould Coll. Tweeddale Coll. Purchased.

# 4. Cyclopsittacus occidentalis.

Opopsitta desmarestii, part., Sclat. Journ. Pr. Linn. Soc. ii. p. 166, sp. 117 (1858); G. R. Gr. Cat. B. New Guin. p. 42 (partim) (1859); Rosenb. (nec Garn.) Journ. f. Orn. 1862, p. 63 (ex Salwatty); id. Nat. Tijdschr. Ned. Ind. xxv. pp. 143, 226 (partim) (1863); Sclat. P. Z. S. 1873, p. 697 (ex Sorong).

Cyclopsitta blythi, part., Wall. P. Z. S. 1864, p. 285 (specim. ex

Psittacula desmarestii, part., Schleg. Mus. P.-B. Psittaci, p. 75 (1864); Finsch, Papag. ii. pp. 620, 957 (partim) (1868); Schleg. Mus. P.-B. Psittaci, Revue, p. 32 (partim) (1874).

Cyclopsittacus desmarestii, part., Salvad. Ann. Mus. Civ. Gen. vii.

p. 754 (1875) (specim. ex Salwatty).

Cyclopsittacus occidentalis, Salvad. Ann. Mus. Civ. Gen. vii. p. 910 (1875), x. p. 27, n. 25, p. 119 (1877); id. Orn. Pap. e Mol. i. p. 152 (1880); Rehnw. Journ. f. Orn. 1881, p. 138 (Consp. Psitt. p. 74); id. Vogelbild. Nachtr. 20 (1883); Guillem. P. Z. S. 1885, p. 619; Salvad, Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 161 (1889); Tristr. Cat. Coll. B. p. 78 (1889).

Cyclopsittacus occipitalis (errore), Guillem. P. Z. S. 1875, p. 620. Cyclopsitta occidentalis, Gieb. Thes. Orn. iii. p. 800 (1877); Sharpe,

Gould's B. New Guin. pt, xix. pl. 3 (1885).

Adult. Very much like C. desmaresti, but the cheeks and earcoverts golden yellow; the blue subocular spot paler and more or less greenish; no blue spot on the occiput; the pileum of a brighter orange-red, and the nape more yellowish.

Hab. Salwatty, Batanta, and the north-western coast of New

Guinea from Sorong to Dorey-Hum.

In some specimens the blue pectoral band is scarcely visible.

a. Ad. sk. b, c. Ad. sk. d. Ad. sk.

New Guinea (A. R. Wallace). New Guinea. Salwatty (July).

Gould Coll. Wallace Coll. Gould Coll.

# 5. Cyclopsittacus blythi.

Psittacula desmarestii, part., G. R. Gr. P. Z. S. 1861, p. 437; Schleg. Mus. P.-B. Psittaci, p. 75 (1864); Finsch, Neu-Guin. p. 158 (partim) (1865); id. Papag. ii. p. 620 (partim) (1868); Schleg. Mus. P.-B. Psittaci, Revue, p. 32 (partim) (1874); Gieb. Thes. Orn. iii. p. 327 (partim) (1877).

Opopsitta desmaresti, part., Rosenb. Journ. f. Orn. 1862, p. 63 (ex. Mysol); id. Nat. Tijdschr. Ned. Ind. xxv. pp. 142, 226, sp. 29 (partim) (1863); id. Journ. f. Orn. 1864, p. 115, sp. 29 (partim). Cyclopsitta blythi, Wall. P. Z. S. 1864, pp. 284, 294; G. R. Gr. Hand-list, ii. p. 168, sp. 8375 (1870); Gould, B. of New Guin.

pt. i. (in the text of C. maccoyi) (1875).

Cyclopsittacus blythi, Salvad. & D'Alb. Ann. Mus. Civ. Gen. vii. p. 811 (1875); Salvad. Ann. Mus. Civ. Gen. vii. p. 911 (1870), x. p. 28, n. 26 (1877); id. Orn. Pap. e Mol. i. p. 154 (1880); Rehnw. Journ. f. Orn. 1881, p. 138 (Consp. Psitt. p. 74); id. Vogelbild. Nachtr. 20 (1883); Guillem. P. Z. S. 1885, p. 619; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 161 (1889).

Adult. Very much like C. occidentalis, but without the blue subocular spot. Total length about 8 inches, wing 4.35, tail 2.2, bill 0.8, tarsus 0.6.

Hab. Mysol.

a. Ad. sk.

Mysol.

A. R. Wallace [C.]. (Type of species.)

# 6. Cyclopsittacus cervicalis.

Cyclopsittacus cervicalis, Salvad. & D'Alb. Ann. Mus. Civ. Gen. vii. p. 811 (1875); Salvad. Ann. Mus. Civ. Gen. ix. p. 12 (1876), x. p. 28, n. 27 (1877); Sharpe, Journ. Linn. Soc., Zool. xiii. p. 310 (1878); D'Alb. P. Z. S. 1879, p. 218; D'Alb. & Salvad. Ann. Mus. Civ. Gen. xiv. p. 31 (1879); Ramsay, Pr. Linn. Soc. N. S. W. iv. pp. 92, 96 (1879); Salvad. Orn. Pap. e Mol. i. p. 155 (1880); Rchnw. J. f. Orn. 1881, p. 138 (Consp. Psitt. p. 74); id. Vogelbild. Nachtr. 20 (1883); Sa'vad. Mem. R. Ac. Sc. Tor. ser. 2, p. 161 (1884). Cyclopsitta cervicalis, Gieb. Thes. Orn. iii. p. 800 (1877); Gould, B. of New Guin. pt. 10, pl. 2 (1879).

Adult. Green; underneath paler and more yellowish; pileum and hind neck orange-red; on the lower part of the hind neck a broad yellow collar; sides of the head yellow, more or less tinged with orange-red; pectoral band and sides of the breast pale blue; upper part of the breast tinged with orange; a concealed red spot on the

innermost greater wing-coverts.

Young. Above green; pileum orange-red, more yellow towards the occiput; cheeks and upper ear-coverts orange-red, lower earcoverts blue; chin yellow tinged with red; throat golden yellow; whole of the hind neck bright blue; back, rump, and upper tailcoverts green; pectoral band bright blue; sides of the breast pale blue; lower parts green, but the breast with a yellowish tinge; quills brown, primaries on their outer webs and primary-coverts bluish green; the primaries with a narrow yellow edge towards the

apical half; base of the quills underneath pale yellow; under wing-coverts pale bluish green; innermost greater wing-coverts with a concealed orange spot on their inner webs; tail green above, olive below: "bill black; feet greenish; irides yellow-rcd" (D'Albertis). Total length about 8 inches, wing 4·4, tail 2·2, bill 0·78, tarsus 0·6.

Hab. South-eastern New Guinea, from Hall Bay to the Fly River.

a. Juv. sk. New Guinea, mainland east of Yule Gould Coll. Island, Feb. (Dr. James).

# 7. Cyclopsittacus coxeni.

Cyclopsitta coxeni, Gould, P. Z. S. 1867, p. 182; id. B. Austr., Suppl. pl. 65 (pt. iv., 1867); G. R. Gr. Hand-list, ii. p. 168, n. 8374 (1870); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 195, n. 511 (1878); id. Tab. List, p. 17, n. 525 (1888); id. Cat. Austr. B. iii. Psittaci, p. 32 (1891).

Psittacula coxeni, Finsch, Papag. ii. p. 957 (1868); Schleg. Mus. P.-B. Psittaci, Revue, p. 34 (1874); Gieb. Thes. Orn. iii. p. 327

(1877)

Cyclopsittacus coxeni, Rchnw. Jown. f. Orn. 1881, p. 131 (Consp. Psitt. p. 74); id. Vogelbild. Nachtr. 21 (1883).

Adult male. General plumage green; feathers of the forehead and of the lores with reddish bases, tipped with green, those of the middle of the forehead tipped with bluish; upper part of the cheeks and ear-coverts red, the upper ear-coverts edged above with yellow; a blue patch or band along the lower part of the cheeks; sides of the body yellow; quills brown; outer webs of the primaries and their coverts bright blue; outermost secondaries green, tinged with blue towards the base of the outer webs; innermost secondaries green; quills underneath with a dull yellowish band; innermost greater wing-coverts with a concealed orange spot on the inner webs; tail above green; underneath dull olive: upper mandible bluish black, under mandible whitish; "feet greenish white; irides hazel" (Gould). Total length 7 inches, wing 3.9, tail 1.9, bill 0.65, tarsus 0.48.

Female. The red feathers of the cheeks are more or less tipped

with green.

 $Ha\ddot{b}$ . Eastern Australia, from Wide Bay district in Queensland to New South Wales.

a. Ad. sk.	N.E. Australia.	Gould Coll. (? Type
		of species.)
b. c. Ad. sk.	Queensland.	Gould Coll.
d. Ad. sk.	N. Australia.	Purchased.
e, f. Ad. sk.	Queensland (J. T. Cockerell).	Salvin-Godman Coll.
g, h, Ad. sk.	N.E. Australia (J. T. Cock-	Tweeddale Coll.
2)	erell).	

# 8. Cyclopsittacus maccoyi.

Cyclopsitta macleayana, Ramsay, Sydn. Morning Herald, Nov. 15, 1874\*; id. P. Z. S. 1875, p. 602; id. Tr. Linn. Soc. N. S. W. ii. p. 195, n. 512 (1878); id. Tab. List, p. 17, n. 526 (1888); De Vis, Rep. Sc. Exp. N. Queensl. p. 33 (1889); Rams. Cat. Austr. B. iii. Psittaci, p. 33 (1891).

Cyclopsitta maccoyi, Gould, P. Z. S. 1875, p. 314; Sclat. P. Z. S. 1875, p. 602 (note); Gould, Birds New Guin. pt. i. pl. 10 (1875);

Gieb. Thes. Orn. iii. p. 800 (1877).

Cyclopsitta leadbeateri, M'Coy, Ann. & Mag. N. H. (4) xvi. p. 54

Cyclopsittacus maccoyi, Rchnw. Vogelbild. t. xxv. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 139 (Consp. Psitt. p. 75).

Adult male. Green, lighter and more yellowish below; on the forehead a band of bright scarlet, bordered with cobalt above and below; lores, feathers round the eyes, and upper part of the cheeks cobalt; on the lower cheeks, from the base of the bill to the tips of the ear-coverts, a broad band of scarlet, and below this a purple-blue band; flank-feathers tipped with bright yellow; primary-coverts and quills externally blue, the innermost secondaries green; the innermost greater wing-coverts have a concealed orange-red spot on the inner webs; quills blackish below, with an oblique yellow band near the base; under wing-coverts light green, those along the carpal edge washed with blue; tail green above, dusky elive below: bill blackish blue; feet greenish. Total length about 6 inches, wing 3.5, tail 1.7, bill 0.55, tarsus 0.4.

Female. Differs from the male in wanting the scarlet band on the cheeks, which are grey tinged with blue.

Hab. Rockingham Bay, N.E. Australia.

*a*. ♀ ad. sk. N. Queensland. Gould Coll. (One of the types.)

# 9. Cyclopsittacus diophthalmus.

Psittacula diophthalma, Hombr. et Jacq. Ann. des Sc. Nat. xvi. p. 318 (1841) (south coast of New Guinea?) (\$\text{2 type examined}\$); \$G. R. Gr. Gen. B. ii. p. 423, n. 19 (1846); id. Cat. B. New Guine. pp. 42, 60 (partim) (1859); id. P. Z. S. 1861, p. 437 (partim); \$Schley. Mus. P.-B. Psittaci, p. 75 (partim) (1864); id. Ned. Tijdschr. Dierk. iii. p. 331 (partim) (1866); Finsch, Papag. ii. p. 627 (partim) (1868); Meyer, Sitzb. k. Ak. Wissensch. Wien, lxix. p. 213 (1874); Schleg. Mus. P.-B. Psittaci, Revue, p. 32 (1874); Meyer, Sitzb. Isis Dresd. 1875, p. 77; Gieb. Thes. Orn. iii. p. 327 (1877).

Cyclopsitta double oeil, Hombr. et Jacq. Voy. Pôle Sud, Atlas, pl. 25

bis. ff. 4, 5 (1846).

Cyclopsitta diophthalma, Jacq.et Pucher. Voy. Pôle Sud, Zool. iii. p.107 (1853); Hartl. Journ. f. Orn. 1854, p. 165; Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 220; id. Naumannia, 1856, Consp. Psitt. sp. 231 (excl. syn.?); Sclat. Journ. Pr. Linn. Soc. ii. p. 166, sp. 118 (1858); Wall. P. Z. S. 1864, pp. 284, 294 (partim); Finsch, Neu-Guin.

<sup>\*</sup> According to the rule followed in the Zoological Catalogues of the British Museum, right to priority cannot be claimed for specific names published in newspapers.

p. 158 (partim) (1865); Gould, P. Z. S. 1867, p. 182; Gray, Handlist, ii. p. 167, sp. 8372 (partim) (1870); Salvad. Ann. Mus. Civ. Gen. vi. p. 75 (1874); Gould, B. New Guin. pt. ix. pl. 4 (1879); Tristr. Cat. Coll. B. p. 78 (1889).

Psittacula diophthalmus, G. R. Gr. P. Z. S. 1858, p. 195 (partim). Opopsitta diophthalma, Sclat. P. Z. S. 1860, p. 227; Rosenb. Journ. f. Orn. 1862, pp. 63, 64, 68; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 142, 143, 144 (1863); id. Journ. f. Orn. 1864, p. 115, sp. 30;

Sclat. P. Z. S. 1873, p. 697.

Cyclopsittacus diophthalmus, Salvad. Ann. Mus. Civ. Gen. x. p. 28, No. 28, p. 120 (1877); id. Orn. Pap. e Mol. i. p. 158 (1880); Rehnw. Vogelbild. t. xxv. f. 8 (1878–83); id. Journ. f. Orn. 1881, p. 393 (Consp. Psitt. p. 75); Guillem. P. Z. S. 1885, p. 620; Meyer, Zeitschr. ges. Orn. 1886, p. 32 (Kafu); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 161 (1889); Meyer, Ibis, 1890, p. 412 (Constantine Harbour).

Cyclopsittacus coccineifrons, Sharpe, Journ. Linn. Soc., Zool. xvi. pp. 318, 426 (1882); Salvad. Ann. Mus. Civ. Gen. xviii. p. 418, no. 6 (1882); id. Orn. Pap. e Mol. iii. p. 516 (1882); Rchnw. Vogelbild. Nachtr. 23 (1883); id. Journ. f. Orn. 1883, p. 416; Salvad.

Mem. R. Ac. Sc. Tor. (2) xl. p. 162 (1889).

Cyclopsittacus aruensis, Nehrk. (nec Schleg.) Journ. f. Orn. 1885, p. 31 (Waigiou); Salvad. Ibis, 1886, p. 151.

Cyclopsitta coccineifrons, Sharpe, Gould's B. New Guin. pt. xxiii. pl. 3 (1887).

Adult male. Green, paler below; sinciput, cheeks, and ear-coverts red; sinciput bordered behind with yellowish; a blue spot before the eyes; a blue band behind the parotic region, bordering the red cheeks; sides of the body yellow; outer webs of the primaries and primary-coverts bright blue; first primary black, like the inner webs of the remainder; quills underneath with a pale yellow oblique band, also the greater under wing-coverts pale yellow on the inner webs; the remainder under wing-coverts pale green; a concealed red spot on the inner web of the innermost greater wing-coverts; tail above green, below dull bluish: "irides yellow" (Hombron) or "black; bill and feet dusky" (D'Albertis). Total length about 6·1 inches, wing 3.6, tail 1.9, bill 0.6, tarsus 0.42.

Young female. Like the male, from which it differs in having the cheeks dusky buff, with a red line running along their upper edge,

from the lores to the ear-coverts.

Hab. New Guinea, Waigiou, Salwatty, Mysol, and Koffiao.

In the series examined I do not find that the characters given as distinctive of the South-eastern New Guinca specimeus hold good.

a. ♂ ad. sk. b-d.  $\beta \circ A$  ad. et ø juv. sk. e. [♀] ad. sk. f. 3 ad. sk.  $g, h. \ \mathcal{J} \ \text{ad. sk.}$ i, k. Ad. sk.

Mysol (A. R. Wallace). Mysol.

Waigama, Mysol, Sept. Tobae, Mysol, July. Mysol (Rosenberg). Astrolabe Mountains.

Gould Coll. Wallace Coll.

Gould Coll. Gould Coll. Tweeddale Coll. Goldie Coll. (Types of C. coccineifrons, Sharpe.) k. Ad. sk. 1. Ad. sk. m. Ad. sk. n. Ad. sk. o. 2 ad. sk.

S.E. New Guinea. Port Moresby. [Fly River], New Guinea. S.E. New Guinea. Salwatty.

H. O. Forbes, Esq. Goldie Coll. Gould Coll. Tweeddale Coll. Purchased.

# 10. Cyclopsittacus arnensis.

Psittacula diophthalma, G. R. Gr. (nec H. et J.) P. Z. S. 1858, p. 183; id. List Psitt. Brit. Mus. p. 90 (1859); id. Cat. B. New Guin. pp. 42, 60 (partim) (1859); id. P. Z. S. 1861, p. 437 (partim); Schleg. Mus. P.-B. Psittaci, p. 75 (partim) (1864); id. Ned. Tijdschr. Dierk. iii. p. 331 (partim) (1866); Rosenb. Reis naar de Zuidoostereil. p. 48 (1867); Finsch, Papag. ii. pp. 627, 957 (partim) (1868).

Opopsitta diophthalma, Sclat. (nec H. et J.) P. Z. S. 1860, p. 227 (from Aru Isl.); Rosenb. Journ. f. Orn. 1862, p. 65; id. Nat.

Tijdschr. Ned. Ind. xxv. pp. 145, 226 (partim) (1863).

Cyclopsitta diophthalma, Wall. P. Z. S. 1864, p. 284 (partim); Finsch, Neu-Guin. p. 158 (partim) (1865); G. R. Gr. Hand-list, ii. p. 167, sp. 8372 (partim) (1870).

Psittacula diophthalma aruensis, Schleg. Mus. P.-B. Psittaci, Revue,

p. 33 (May 1874) (type examined).

Cyclopsitta aruensis, Salvad. Ann. Mus. Civ. Gen. vi. p. 73 (Angust 1874); Gould, B. New Guin. pt. ix. pl. 5 (1879).
Cyclopsittacus aruensis, Salvad. Ann. Mus. Civ. Gen. x. p. 28, n. 29 (1877); D'Alb. & Salvad. Ann. Mus. Civ. Gen. xiv. p. 34 (1879); Salvad. Orn. Pap. e Mol. i. p. 161 (1880); Rehnw. Journ. f. Orn. 1881, p. 394 (Consp. Psitt. p. 75 a); id. Vogelbild, Nachtr. 22 (1883); Meyer, Zeitschr. f. ges. Orn. i. p. 273 (1884); Guillem. P. Z. S. 1885, p. 620; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 162 (1889); Tristr. Cat. Coll. B. p. 78 (1889).

Adult male. Very much like the male of C. diophthalmus, from which it differs in having the red colour of the head lighter, less extended on the crown, where there is scarcely any yellow behind the red; the blue spot before the eyes is smaller and paler, while the blue band bordering the lower part of the cheeks is more extended and reaches the chin. Total length 6.3 inches, wing 3.4, tail 1.7, bill 0.57, tarsus 0.41.

Female. Very different from that of C. diophthalmus, having no red whatever on the head; sinciput blue, lighter on the forehead; a blue line runs under the eyes to the upper ear-coverts; cheeks

pale buff, bordered below and behind by a blue band.

Hab. Aru Islands and the middle of Southern New Guinea along the Fly River.

a-d.  $\beta \supseteq ad$ . sk. e, f.  $\beta \supseteq ad$ . sk.

Aru Islands. Aru Islands (A. R. Wallace).

Wallace Coll. Gould Coll.

# 11. Cyclopsittacus guglielmi III.

Psittacula guglielmi III., Schleg. Ned. Tijdschr. Dierk. iii. p. 252 (1866) (types examined); Finsch, Papag. ii. p. 625 (1868); Schleg. Mus. P.-B. Psittaci, Revue, p. 34 (1874); Gieb. Thes. Orn. iii. p. 328 (1876); Rosenb. Malay. Archip. p. 592 (1878-79).

Cyclopsitta guglielmi III., G. R. Gr. Hand-list, ii. p. 168, sp. 8379 (1870); Becc. Ann. Mus. Civ. Gen. vii. p. 715 (1875); id. Ibis,

1876, p. 253.

Cyclopsittacus gnglielmi tertii, Salvad. Ann. Mus. Civ. Gen. ix. p. 15 (1876), x. p. 28, n. 30 (1877); Rehnw. Journ. f. Orn. 1881, p. 394 (Consp. Psitt. p. 75 a); id. Vogelbild. Nachtr. 24 (1883).

('yelopsittacus' guglielmi III., 'Salvad. Orn. Pap. e Mol. i. p. 163 (1880); id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 162 (1889).

Adult male. Green; upper parts darker, underparts paler, yellowish green; sinciput, superciliary stripe, a narrow subocular line, and a spot behind the eyes blue; lores, sides of the head, and throat pale yellow; a perpendicular black stripe on the cheeks; breast orange; quills brown, primaries blue on the outer webs; under wing-coverts green, those near the carpal edge bluish; innermost greater wing-coverts with a yellow concealed spot; tail above green, underneath dusky greenish: bill and naked skin round the eyes black; feet and irides dusky. Total length 6.3 inches, wing 3.8, tail 1.4, bill 0.63, tarsus 0.5.

Adult female. Like the male, but the breast yellowish green; cheeks yellow; ear-coverts and sides of the neck orange; a black band separates the yellow cheeks from the orange car-coverts; sides of the head and cheeks bordered below by a greenish-blue band

reaching the throat.

Hab. Salwatty and North-western New Guinea, near Sorong.

a. Ad. (probably female) sk. b. ♂ ad. sk.

New Guinea (?). New Guinea.

Purchased. Purchased.

# 12. Cyclopsittacus suavissimus.

Cyclopsitta suavissima, Sclat. P. Z. S. 1876, p. 520, pl. 54 (♂♀); Gieb. Thes. Orn. iii. p. 800 (1877); Sharpe, Journ. Linn. Soc., Zool. xiii. p. 491 (1878); Gould, B. of New Guin. pt. vii. pl. 11 (1878); Sharpe, Journ. Linn. Soc., Zool. xiv. p. 685 (1879).

Cyclopsittacus suavissimus, Salvad, Ann. Mus. Civ. Gen. ix. p. 12 (1876), x. p. 28, sp. 31 (1877); Ramsay, Pr. Linn. Soc. N. S. W. i. p. 393 (1876), iii. p. 252 (1878); Salvad, Orn. Pap. e Mol. i. p. 165 (1880); Rehnw. Vogelbild. t. xxv. f. 9 (1878-83); id. Journ. f. Orn. 1881, p. 394 (Consp. Psitt. p. 75 a); Sharpe, Journ. Linn. Sac., Zool. xvi. p. 426 (1882); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 162 (1889); Tristr. Cat. Coll. B. p. 78 (1889).

Adult male. Green, upper parts darker; abdomen and under tailcoverts pale green; sinciput, superciliary and subocular stripes, and a spot behind the eyes blue; lores and upper part of the cheeks whitish, rest of the cheeks black; a broad band from the ear-coverts to the throat, surrounding the black cheeks, yellowish white; breast

orange; sides yellow; quills brown; primary-coverts and primaries on the outer webs deep blue; the innermost greater wing-coverts with a concealed yellow spot on the inner webs; quills underneath with a yellowish-white band; under wing-coverts pale green, those near the carpal edge blue; tail green: bill, feet, and irides black. Total length about 5.2 inches, wing 3.2, tail 1.3, bill 0.5, tarsus 0.42.

Adult female. Like the male, from which it differs in having the cheeks blue, the ear-coverts and the sides of the neck orange, and

the breast greenish with an orange tinge.

Young male. Like the female, but the forehead scarcely tinged with blue, the lores yellowish white; cheeks greenish, tinged with blue on the upper parts; ear-coverts, sides of the neck, and throat pale yellow; breast yellowish, each feather edged with dusky.

Hab. South-eastern New Guinea.

a, b. Ad. sk.	Port Moresby.	Gould Coll.
c, d. Ad. sk.	Port Moresby.	K.Broadbent, Esq. [C.].
é. Ad. sk.	Port Moresby.	A. Goldie [C.].
f. of ad. sk.	S.E. New Guinea (R. Hun-	Tweeddale Coll.
	stein).	
g. Ad. sk.	S. New Guinea (A. Goldie).	Tweeddale Coll.
h. Ad. sk.	S. New Guinea.	A. Goldie [C.].

# 13. Cyclopsittacus melanogenys.

"Psittacula melanogenia, Rosenb.," Schleg. Ned. Tijdschr. Dierk. iii. p. 330 (1860) (type examined); Rosenb. Nat. Tijdschr. Ned. Ind. xxix. p. 142 (1867); id. Reis naar de Zuidoostereil. p. 49 (1867); Schleg. Mus. P.-B. Psittaci, Revue, p. 35 (1874); Rosenb. Malay. Archip. p. 593 (1878-79).

Psittacula inelanogenys, Finsch, Papag. ii. p. 626 (1868); Gieb. Thes.

Orn. iii. p. 328 (1876).

Cyclopsitta melanogenia, G. R. Gr. Hand-list, ii. p. 168, sp. 8378 (1870); Sclat. P. Z. S. 1876, p. 520; Gould, B. of New Guin.

pt. vii. pl. 12 (1878).

Cyclopsittacus melanogenys, Salvad. Ann. Mus. Civ. Gen. ix. pp. 14, 15 (1876), x. p. 29, n. 33 (1877); Salvad. P. Z. S. 1878, p. 92; D'Alb. & Salvad. Ann. Mus. Civ. Gen. xiv. p. 35 (1879); Salvad. Voy. Chall., Birds, p. 74 (1881); Rehnw. Journ. f. Orn. 1881, p. 395 (Consp. Psut. p. 75b); id. Voyelbid. Nachtr. 25 (1883); Meyer, Zeitschr. f. ges. Orn. i. p. 273 (1884); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 162 (1889).

Cyclopsittacus fuscifrons, Salvad. Ann. Mus. Civ. Gen. ix. p. 14 (1870),
 x. p. 28, n. 32 (1877); D'Alb. Sydn. Mail, 1877, p. 248; id. Ann.

Mus. Civ. Gen. x. pp. 8, 19 (1877); id. Ibis, 1877, p. 366.

Adult male. Green, abdomen and under tail-coverts paler; sineiput, feathers round the eyes, and a spot behind the eyes brown; sides of the head whitish, with a large black spot on the cheeks; the feathers of the throat show a faint bluish tinge; breast orange;

sides of the body tinged with yellow-orange; quills brown, primary-coverts and carpal edge blue, like the outer webs of the primaries; a yellowish band towards the base of quills below; a concealed yellow spot on the inner web of the innermost greater wing-coverts; under wing-coverts pale green; tail green, underneath dusky: bill black; feet olive; irides brown. Total length 4.75 inches, wing 3.2, tail 1.3, bill 0.5, tarsus 0.4.

Adult female. Like the male, but the auricular region orange instead of whitish, the spot on the cheeks black tinged with blue; the feathers of the throat greenish with bluish tips; breast dull

orange, each feather more or less edged with green.

Young. Like the female, but the sinciput scarcely brown, the sides of the head dull yellowish, the spot on the cheeks greenish brown; the throat greenish; bill pale brown.

Hab. The Aru Islands and the middle of Southern New Guinea,

along the Fly River.

a. β ad. sk.
b, c. ♀ ad. et
ad. sk.
d. Juv. sk.

Aru Islands.

Wokan, Aru Islands.
Gould Coll.
Voy. H.M.S. 'Challenger.'
Gould Coll.

# 14. Cyclopsittacus nigrifrons.

Cyclopsittacus nigrifrons, Rehnw. Allg. deutsche ornith. Gesell. zu Berlin, Bericht iii. p. 6 (20 März, 1891); id. Journ. f. Orn. 1891, p. 217 (Kaiser-Wilhelmsland); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xlii. p. 90 (1891).

Similar to *C. melanogenys*, but larger; forehead deep black and inner web of the quills black, with no yellow edges. Total length 140 millim., wing 90, tail 40, bill 15, tarsus 12.

Hab. Northern New Guinea, near Augusta River (Hunstein). I only know this species from the recently published description.

# Family IV. CACATUIDÆ.

Sternum complete; orbital ring completely ossified, with a process bridging the temporal fossa (Garrod, P. Z. S. 1874, p. 594); nostrils open in a eere not much swollen, generally naked, but sometimes feathered; bill very deep, deeper than long, with the upper mandible generally much compressed; hook of the upper mandible nearly perpendicular, except in Licmetis, and with a file-like surface underneath; tarsus short; head always crested; as a rule, only the left carotid present.

Ranging over the Australian Region, and also in the Philippines.

# Key to the Subfamilies.

a. Tail-feathers broad, not pointed .. CACATUINÆ, p. 101. b. Tail-feathers narrow, and pointed .. CALOPSITTACINE, p. 135

# Subfamily I. CACATUINÆ.

# Key to the Genera.

- I. Cheeks entirely naked; upper mandible much compressed and much narrower than the under mandible; feathers of the crest very long and narrow..... 1. Microglossus, p. 102. II. Cheeks feathered.
  - a. Tail rather long, the outer tail-feathers shorter than the others; feathers of the crest broad; bill

short, much curved and very high; general colour brown or black . . . . 2. Calyptorhynchus, p. 106.

b. Tail moderate, nearly even. a'. General colour above and below

grey; head and crest red in the

male; cere feathered...... 3. Callocephalon, p. 113,

b'. General colour white or rosy white, except in Cacatua roseicapilla, which is grey above, rosecolour on the head and below.

a''. Bill with the hook of the upper mandible of the ordinary size and nearly perpendicular .... 4. CACATUA, p. 115.

b". Bill with the hook of the upper mandible very long, slender, and projecting forward ..... 5. LIGMETIS, p. 133.

To the Cacatuida has been assigned by Prof. A. Milue-Edwards the following extinct species, but, according to Prof. A. Newton (in litt.), it seems that its place in the system is far from being satisfactorily established; geographical distribution is not in favour of Lophopsittacus belonging to the Cacatuidae.

LOPHOPSITTACUS. = No graffactus Type.

Lophopsittaeus, Newt. P. Z. S. 1875, p. 350 . . . . L. mauritianus.

# Lophopsittacus mauritianus.

Broad-billed Parrot, Owen, Trans. Zool. Soc. vi. p. 53 (1866).

Psittacus mauritianus, Owen, Ibis, 1866, p. 168; id. Ann. Sc. Nat. (5) vi. pp. 88-90, pl. 3. ff. 4, 5 (under mandible) (1866); A. Milne-Edw. ibid. pp. 91, 106 et seq. (1866), xix. art. 3, p. 25, pl. 15.

ff. 1, 1a, 1b (tibia) (1874).
Psittacus (Lophopsittacus) mauritianus, A. Newt. P. Z. S. 1875, pp. 349, 350.

Lophopsittacus mauritianus, Newt. Enc. Brit. (ed. 9) iii. p. 732, ff. 44, 46 (rough sketch of the living bird) (1875); A. & E. Newt. Ibis, 1876, pp. 282, 289; E. Newt. Trans. Norf. & Norw. Nat. Soc. iv. p. 550 (1888).

A "frontal crest and wing so short as possibly to be inadequate

for flight" (A. Newton).

This bird, which formerly existed in Mauritius, is known only from its osseous remains, a considerable number of which have been found deposited with those of the Dodo in the peat of the Mare aux Songes; to it has been referred the original of a rough drawing in the MS. journal of an old Dutch voyager.

#### 1. MICROGLOSSUS.

Psittacus, sect. Probosciger, Kuhl\*, Consp. Psitt. p. 12 

(1821)....Microglossus, Geoffr. St.-Hilaire, MS.; Vieill. Gal. des Ois. i. p. 47, pl. 50 (1821–23)‡ . . . . . . . .

Microglossum, Vig. Zool. Journ. ii. p. 63 (1825).
Microglossa, Voigt, Cuv. Uebers. p. 47 (1831); Selat.
Journ. Pr. Linn. Soc. ii. p. 166 (1858).
Eurhynchus, "Latr.," Less. Tr. d'Orn. p. 183 (1831)
(ex Latreille, Fam. Règn. An. p. 76, 1825).

Macroglossum, Temm. Coup d'Œil gén. sur les Poss. Néerl. iii. p. 405 (1849).

Range. The Papuan Islands and North Australia.

Type.

M. aterriuus.

M. aterrimus.

M. aterrimus.

Beecholo 1827

<sup>\*</sup> Probosciger is not a generic name, but a term used by Kuhl for his sect. vi. of the genus Psittacus.

<sup>†</sup> Solenoglossus, Ranz., has certainly the priority over Microglossus, Geoffr., but it conveys quite a false idea of the structure of the tongue.

The genus Microglossus was established by Vieillot after Etienne Geoffroy St.-Hilaire, who, in a memoir "Sur les Appareils de la Déglutition et du Goût

# 1. Microglossus aterrimus.

Great Black Cockatoo, Edw. Glean. vii. t. 316 (1764). Le Kakatoës noir, Buff. Hist. Nat. Ois. vi. p. 97 (1779).

Black Cockatoo, Lath. Gen. Syn. i. p. 261 (1781); id. Gen. Hist. ii.

p. 198 (1822).

Psittacus aterrimus, Gm. S. N. i. p. 330, n. 93 (1788); Bechst. Kurze Uebers, p. 87, pl. 14 (1811); Less. Man. d'Orn. ii. p. 145 (1828); id. Voy. Coq., Zool. i. pt. 2, p. 625 (1828); Voigt, Cuv. Uebers. p. 747 (1831).

Psittacus gigas, Lath. Ind. Orn. i. p. 107 (1790); Shaw, Gen. Zool. viii. p. 474, pl. 71 (1811); Temm. Tabl. Meth. p. 52 (1839).

Ara gris à trompe, Levuill. Perr. pl. 11 ( $\mathfrak{P}$ ) (1801).

Ara noir à trompe, Levaill. Perr. pls. 12 et 13 (head) (3) (1801).

Psittacus griseus, Bechst. Kurze Üebers. p. 87 (1811).

Cacatua aterrima, Vieill. N. D. xvii. p. 13 (1818); id. Euc. Méth.

p. 1415 (1823); Schley. Journ. f. Orn. 1861, p. 380. Psittacus goliath, Kuld, Consp. Psitt. p. 92 (1820); Less. Man. d'Orn. ii. p. 145 (1828); Voigt, Cuv. Uebers. p. 749 (1831); S. Müll. Verh. Land- en Volkenk. pp. 22, 167 (1839-44).

Solenoglossus zeylanicus, Ranz. Elem. di Zool. iii. pp. 2, 21, tav. v.

ff. 2, 3 (1821).

Grey Cockatoo, Lath. Gen. Hist. ii. p. 199 (1822).

Perroquet microglosse, Geoffr. St.-Hil. Mém. du Mus. x. p. 186 et

seq., pl. 11. ff. 13, 14, 16 (1823).

Microglossus aterrimus, Vieill. Gul. des Ois, i. p. 47, pl. 50, pl. D. no. 8 (1821-23); Wagl. Mon. Psitt. p. 682 (1832); Selb. Nat. Libr. vi. p. 138, pl. 16 (1836); Sw. Class. B. ii. p. 302 (1837); Bp. Consp. i. p. 7 (1850); Gould, B. Austr., Suppl. pl. 61 (pt. i., 1851); Bp. Rev. et Mag. de Zool. 1854, p. 156, sp. 277; id. Naumannia, 1856, Consp. Psitt. sp. 290; Schley. Jahrb. Natura Artis Magistra, 1861, p. 181, with plate; Rosenb. Nat. Tijdschr. Ned. Ind. xxv. p. 227, sp. 33 (1863); id. Journ. f. Orn. 1864, p. 115, sp. 33; Schleg. Dierent. p. 84 (1864); Bernst. Nat. Tijdschr. Ned. Ind. xxvii. pp. 297, 298 (1864); id. Ned. Tijdschr. Dierk, ii. pp. 327, 328 (1865); Finsch, Neu-Guin. p. 159 (1865); id. Papag, i. p. 370 (1867), ii. p. 942 (1868); Rosenb. Reist. naar Geelvinkb. p. 56 (1875); Gieb. Thes. Orn. ii. p. 584 (1875); Diggles, Orn. of Austr. ii. p. 75 (1877): Salvad. Ann. Mas. Civ. Gen. x. pp. 25, 119 (1877); id. P. Z. S. 1878, p. 92; Forbes, P. Z. S. 1878, p. 125; Ramsay, Pr. Linn. Soc. N. S. W. iv. pp. 91, 96 (1879); Salvad. Orn. Pap. e Mol. i. p. 107 (1880); Rehnw. Vogelbild. t. xii. f. 5 (1878-83); id. Journ. f. Orn. 1881, p. 35 (Consp. Psitt. p. 35); Salvad. Voy. Chall., Birds, p. 74 (1881); Forbes, ibid. p. 90 (1881); Rumsay, Pr. Linn. Soc.

dans les Aras Indiens, ou Perroquets Microglosses" (Mém. du Mus. x. pp. 186-198, pl. 11. ff. 13, 14, 16, 1823), proposed the French name "Microglosse." The memoir was read the 6th July, 1821, but was not printed till 1823. In the meantime, as Geoffroy St.-Hilaire says (l. c. p. 198, note), Vieillot published the genus Microglossus, attributing it to Geoffroy St.-Hilaire, in the 'Galerie des Oiseaux, i. p. 47; the date generally bestowed on this work is 1825; but we find in Engelmann's 'Bibliotheca' Historico-naturalis' that the work was published in 82 parts, from 1820 to 1826; and as Geoffroy St.-Hilaire in 1823, in the note mentioned above, says that Vicillot had already published the genus Microglossus in the 'Galerie des Oiseaux,' it is quite evident that the date of the same must be between the 6th of July 1821 and 1823. (Cf. 'Ibis,' 1890. p. 125.)

N. S. W. (2) iii. p. 27 (1883); Meyer, Zeitschr. f. ges. Orn. i. p. 273 (1884); Nehrk. Journ. f. Orn. 1885, p. 31; Guillem. P. Z. S. 1885, p. 618; Meyer, Vogel-Skelett. t. xliii. (1878–89); Ramsay, Tab. List, p. 16 (1888); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 28 (1889); North, Descr. Cat. Nests & Eggs Austr.

Birds, p. 254 (1889).

Microglossum aterrinum, Steph. Gen. Zool. xiv. p. 111 (1826); G. R. Gr. Gen. B. ii. p. 424, n. 1 (1845); id. P. Z. S. 1858, pp. 184, 195, 1859, p. 159; id. Cat. B. New Guin. pp. 43, 60 (1859); id. List Psitt. Brit. Mus. p. 96 (1859); Selat. P. Z. S. 1860, p. 227; G. R. Gr. P. Z. S. 1861, p. 437; Wall. P. Z. S. 1864, p. 281; Schleg. Mus. P.-B. Psittaci, p. 147 (1864); Bernst. Ned. Tijdschr. Dierk. ii. p. 328 (1865); Gould, Handb. B. Austr. ii. p. 27 (1865); Schleg. Ned. Tijdschr. Dierk. iii. p. 338 (1866); Roseub, Reis maar de Zuidoostereil, p. 48 (1867); G. R. Gr. Handlist, ii. p. 171, sp. 8413 (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 67 (1874); Rosenb. Reist. naw Geelvinkb. pp. 66, 83 (1875); Salvad, Ann. Mus. Civ. Gen. vii. p. 753 (1875); Meyer, Sitzb. Isis zu Dresd. 1875, p. 76; Ramsay, Pr. Linn. Soc. N. S. W. i. p. 394 (1876); D'Alb. Sydn. Mail, 1877, p. 248; id. Ann. Mus. Civ. Gen. x. p. 19 (1877); Sharpe, Journ. Linn. Soc., Zool. xiii. p. 491, n. 10 (1878); Rosenb. Zool. Gart. 1878, p. 347; D'Alb. & Salvad. Ann. Mus. Civ. Gen. xiv. p. 129 (1879); Sharpe, Journ. Linn. Soc., Zool. xiv. p. 685 (1879); Moseley, Not. Chall. p. 352 (1879); Tristr. Cat. Coll. B. p. 73 (1889).

Microglossum goliath, Steph. Gen. Zool. xiv. p. 111 (1826); Wall. P. Z. S. 1864, p. 281; G. R. Gr. Hand-list, ii. p. 171, sp. 8414

(1870).

Microglossum ater (sic), Less. Tr. d'Orn. p. 184 (1831).

Microglossus griseus, Sw. Class. B. ii. p. 302 (1837).

Eurhynchus gigas, Less. Compl. de Buff. ix. Ois. p. 20 (1837): op. cit. 2nd ed. Ois. p. 603 (1838).

Microglossum nigerrimum, Less. ibid. pl. 27 (1838).

Microglossa aterrima, Sclat. Journ. Pr. Linn. Soc. ii. p. 166, sp. 122 (1858).

Cacatua intermedia, Schleg. Jahrb. Nat. Art. Magistra, 1861, p. 186; id. Journ. f. Orn. 1861, p. 380.

Microglossus goliath, Finsch, Neu-Guin, p. 159 (1865).

### Var. minor.

Psittacus aterrimus, Kuhl (nee Gm.), Consp. Psitt. p. 81 (1820). Ara alecto, Temm. Disc. Faun. Jup. p. xvii (183-?) \* (type examined).

Eurhynchus alecto, Less. Compl. de Buff. ix. p. 200 (1837); id.

op. cit. 2nd ed. Ois. p. 603 (1838). Microglossum alecto, G. R. Gr. Gen. B. ii. p. 424, n. 2 (1845) ; id. List Psitt. Brit. Mus. p. 97 (1859); id. Cat. B. New Guin. pp. 43, 60 (1859); Sel. P. Z. S. 1860, p. 227; G. R. Gr. P. Z. S. 1861, p. 473 (part.); Schleg. Mus. P.-B. Psittaci, p. 151 (1864); G. R. Gr. Hand-list, ii. p. 171, sp. 8415 (1870).

Macroglossum alecto, Temm. Coup d' Œil, iii. p. 405 (note) (1849). Microglossus alecto, Bp. Consp. i. p. 7 (1850); id. Naumannia, 1856, Consp. Psitt. sp. 291; Rosenb. Naturk. Tijdschr. Ned. Ind. xxv. p. 227, sp. 34 (1863); id. Journ. f. Orn. 1864, p. 115, sp. 34;

<sup>\*</sup> I have not been able to find this reference, which is given by Lesson, Compl. de Buff, ix. p. 200.

Schleg. Dierent. p. 84 (1864); Bernst. Nat. Tijdschr. Ned. Ind. xxvii. p. 298 (1864); id. Ned. Tijdschr. Dierk. ii. p. 328 (1865). Microglossa alecto, Sclat. Journ. Pr. Linn. Soc. ii. p. 166, sp. 123 (1858); Sclat. P. Z. S. 1861, p. 365; Parker, P. Z. S. 1865, p. 235; Sclat. List Vert. An. 8th ed. p. 315 (1883).

Cacatua alecto, Schleg. Journ. f. Orn. 1861, p. 380. Microglossus aterrimus, Finsch, Papag. i. p. 370 (part.) (1867). Microglossum aterrimum, Schleg. Mus. P.-B. Psittaci, Revue, p. 67 (part.) (1874).

Adult male. Slaty black, powdered with grey, when alive; forehead and lores deep velvety black; a long crest of narrow feathers on the head; wings and tail with green reflexions; naked cheeks pale red, bordered with pale yellow, the two colours gradually blending into each other: bill and feet black; irides dark brown. Total length from 31 to 29 inches, wing about 15, tail about 10, bill 4.2, tarsus 1.1.

Adult female. Smaller than the male.

Young. Differs from the adult bird in having the abdomen, the under wing-coverts and under tail-coverts with narrow yellowish bands, and the tip of the upper mandible more or less whitish.

Hab. Papuan Islands and North Australia—New Guinea, Waigiou, Ghemien, Sorong, Salwatty, Mysol, Jobi, Aru Islands,

and Cape York.

The birds from the Aru Islands are much smaller than those from New Guinea; still the smallest specimen I have ever seen was from Waigiou—total length 25.7 inches, wing 12.8, tail 9.5, bill 2.7 \*.

~		
a. Ad. sk.	Australia.	Purchased. (Figured by Shaw.)
b. & ad. sk.		Wallace Coll.
c, d. Ad. et juv.	New Guinea.	Wallace Coll.
sk. e. Ad. sk.	New Guinea.	Gould Coll.
f. Ad. head.	New Guinea (Dr. Comrie).	Tweeddale Coll.
g. Ad. sk.	Port Moresby.	K. Broadbent, Esq.
2 1 d al-	Margal	[C.].
$h$ . Ad. sk. $i$ , $k$ . $\beta \circ 2$ ad. sk.		Wallace Coll. Wallace Coll.
l. 3 ad. sk.		'Challenger' Exp.
m, n. Ad. sk.		Salvin-Godman Coll.
o, p. ♂ ♀ ad. sk.	Cape York.	'Challenger' Exp.
q. ♂ ad. st.	Cape York.	J. Macgillivray, Esq.
	0 77 1	[P.].
r. Imm. sk.	Cape York.	J. Maegillivray, Esq.
s. Ad. sk.	Port Albany (C. Coxen).	[P.]. Tweeddale Coll.
t. Juv. sk.	Port Albany.	Purchased.
u. Skeleton.	Aru Islands.	a mondood,
v, w. Skulls.		

<sup>\*</sup> Temminek (Coup d'Œil, iii. p. 405) says that the Papuans from Triton Bay told Dr. Solomon Müller of a black Cockatoo larger than Microglessus aterrimus, and with much longer tail, living in the interior of New Guinea; also Von Rosenberg (Journ. f. Orn. 1862, p. 64) heard from the natives near Karusa river, on the west coast of New Guinea, of a very large Cockatoo with long tail and feathered cheeks, living in the Interior.

#### 2. CALYPTORHYNCHUS.

Type.

Calyptorhynchus, Vig. & Horsf. Trans. Linn. Soc. xv. p. 264 (1826) . . . C. banksii. Banksianus, Less. Tr. d'Orn. p. 179 (1831) ..... C. banksii. Calvptorrhynchus, Finsch, Papag. i. p. 329 (1867).

Range. Confined to Australia.

# Key to the Species.

I. A light patch on the ear-coverts. a. Patch on the ear-coverts and tail-band white ..... baudini, p. 106. b. Patch on the ear-coverts and tail-band Larger; wing from 18 to 16 inches .... funereus, p. 107. b'. Smaller; wing from 15 to 14 inches.... xanthonotus, p. 108. II. No light patch on the ear-coverts; tail-band, red in the adult males, red, more or less tinged with yellow and crossed by black narrow bands, in the immature birds and perhaps also in the adult females. a''. Head and neck like the body, glossy greenish black. a''''. Larger; total length about 24 inches; crest longer. a<sup>4</sup>. Bill smaller and less powerful banksi, p. 109. b4. Bill larger, much more powerful macrorhynchus, p. 110. b". Smaller; total length about 22 inches; crest shorter..... stellatus, p. 111. b". Head and neck brown; upper parts

viridis, p. 112.

# 1. Calyptorhynchus baudini.

glossy greenish black .....

Calyptorhynchus baudini, Vig. in Lear's Parr. pl. 6 (1832); Lafresn. Mag. de Zool. 1834, p. —, pl. 25 (head); Bourj. Perr. pl. 73 (1837-38); Gould, B. Austr. v. pl. 13 (1846); G. R. Gr. Gen. B. ii. 426, n. 5 (1846); Rehnh. Vöy. N. Holl. n. 462 (1850); Bp. Rev. et May. Zool. 1854, p. 156, n. 272; Souancé, Rev. et Mag. Zool. 1856, p. 225; Bp. Naumannia, 1856, Consp. Psitt. n. 285; G. R. Gr. List Psitt. Brit. Mus. p. 98 (1859); Schley. Dievent. p. 84 (1864); id. Mus. P.-B. Psittaci, p. 155 (1864); Gould, Handb. B. Austr. ii. p. 25 (1865); Finsch, Papag. i. p. 363 (1867); G. R. Amer. R. p. 29 (1809); Frisen, Fapig. I. p. 303 (1807); G. R. Gr. Hand-list, ii. p. 171, n. 8409 (1870); Gieb. Thes. Orn. i. p. 551 (1872); Schleg. Mus. P.-B. Psittaci, Revue, p. 70 (1874); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 460 (1878); Rehnw. Vogelbild. t. xviii. f. 1 (1878–83); id. Journ. f. Orn. 1881, p. 32 (Consp. Psitt. p. 32); Ramsay, Tab. List, p. 16, n. 479 (1888); Tristr. Cat. Coll. B. p. 72 (1889); North, Deser. Cat. Norte & Farm Angle P. 1889. Nests & Eggs Austr. Birds, p. 253 (1889).

Plyetolophus (?) baudinii, Sw. Class. B. ii. p. 302 (1837). Banksianus baudinii, Less. Compl. de Buff. ix. p. 193 (1837); id. op. cit. ed. 2, p. 602 (1838).

Cacatua baudinii, Schleg. Journ. f. Orn. 1861, p. 380.

Adult. Blackish brown, glossed with green, especially on the forehead, all the feathers narrowly tipped with dull white; face nearly black; ear-coverts creamy white; under tail-coverts with hidden white spots; all but the two central tail-feathers crossed by a very broad whitish band; the margin of the outer web of the banded feathers blackish brown; the shafts black: iris blackish brown; bill lead-colour; feet dull yellowish grey, tinged with Total length 23 inches, wing 15.2, tail 14, bill 2.3, olive. tarsus 1.1.

Hab. South-western Australia.

Sir G. Grey [P.]. a. Imm. st. S. Australia. b. Ad. var. st. S. Australia. Purchased. S.W. Australia (J. T. Cocherell). Salvin-Godman Coll. c. Ad. sk.

# 2. Calyptorhynchus funereus.

Psittacus funereus, Shaw, Nat. Misc. pl. 186 (1789); Lath. Suppl. Ind. Orn. ii. p. xxii (1802); Kuhl, Consp. Psitt. pp. 12, 89 (1820); Voigt, Cuv. Vebers. p. 738 (1831).

Banksian Cockatoo, var. C, Lath. Syn. Suppl. ii. p. 91 (1802).

Banksian Cockatoo, first and fourth var., Lath. Syn. Suppl. ii. p. 92

Psittacus banksii, part., Shaw, Gen. Zool. viii. pt. 2, p. 476 (1811).

Funereal Cockatoo, *Lath. Gen. Hist.* ii. p. 202, n. 131 (1822). Cacatua banksii, var. 3, Vieill. N. D. xvii. p. 9 (1817); id. Enc.

Méth. iii. p. 1412 (1823).

Calyptorhynchus funereus, Vig. & Horsf. Trans. Linn. Soc. xv. p. 271 (1826); Steph. Gen. Zool. xiv. p. 109 (1826); Wagl. Mon. Psitt. p. 688 (1832); Lafr. Mag. de Zool. 1834, p. -, pl. 24 (head); Bourj. Perr. pl. 70 (1837-38); G. R. Gr. Gen. B. ii. p. 426, n. 1 (1846); Gould, B. Austr. v. pl. 11 (1846); Blyth, Cat. B. Mus. (1646); Reduct, B. Hastr., pp. 11 (1646); Bigdi, Cat. B. Hastr., A. S. B. p. 1 (1849); Relunb. Vög. N. Holl. n. 464 (1850); Bp. Consp. i. p. 7 (1850); Licht. Nomencl. p. 69 (1854); Bp. Rev. et Mag. de Zool. 1854, p. 156, no. 270; id. Naumunnia, 1856, Consp. Psitt. n. 283; G. R. Gr. List Psitt. Brit. Mus. p. 98 (1859); Schleg, Dierent, p. 84 (1864); id. Mus. P.-B. Psitt, p. 155 (1864); Gould, Handb. B. Austr. ii. p. 20 (1865); Pelz. Novara Reis., Vog. p. 100 (1865); Nitzsch, Pterylogr. (Engl. ed.) p. 102 (1867); Finsch, Papag. i. p. 357 (partim) (1867); G. R. Gr. Hand-list, ii. p. 171, n. 8410 (1870); Gieb. Thes. Orn. i. p. 551 (partim) (1872); Schleg. Mus. P.-B. Psittaci, Revue, p. 70 (1874); Ramsay, P. Z. S. 1875, p. 601; Diggl, Orn. Austr. ii. p. 75 bis, pl. 75 bis (head) (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 458 (1878); Sclat. P. Z. S. 1879, p. 663: Forbes, P. Z. S. 1880, p. 77 (note); Rehnw. Vogelbild. t. xii. f. 4 (1878-83); id. Journ. f. Orn. 1881, p. 32 (Consp. Psitt. p. 32); Salv. Cat. Strickl. Coll. p. 454 (1882); Sclat. List Vert. An. 8th ed. p. 315 (1883); Broudb. Pr. R. Soc. Queensl. ii. p. 124 (1885); Ramsay, Tab. List, p. 16, n. 478 (partim) (1888); North, Descr. Cat. Nests & Eggs, p. 253 (1889).

Banksianus australis (femelle), Less. Tr. d'Orn. p. 180 (1831).

Plyctolophus funeralis, Sw. Class. B. ii. p. 302 (1837). Banksianus funereus, Less. Compl. de Buff. ix. p. 193 (1837); id. op. cit. ed. 2, p. 602 (1838).

Cacatua funerea, Schley, Journ. f. Orn. 1861, p. 379.

Adult. Brownish black, glossed with green, particularly on the head; feathers of the body narrowly margined with brown, more or less olive on the underparts; ear-coverts dull wax-yellow; all but the two central tail-feathers crossed by a very broad band, pale yellow, more or less freekled with irregular zigzag markings of brownish black; the external web of the outer tail-feathers and the margin of the external web of the other banded feathers brownish black: "bill black; eyes blackish brown; feet nearly blackish brown" (Gould). Total length 24 inches, wing 18, tail 14, bill 2.1, tarsus 1·1.

Young. The ear-coverts are of a brighter yellow, the edges of the feathers of the underparts are broader and of a brighter yellowish olive; the band on the tail is more freekled with brown, and the bill is whitish, with the tip dark.

Hab. South-eastern Australia and Tasmania.

a. Ad. sk.

b-f. Ad. et imm. sk. Australia (J. T. Cockerell). Queensland. g. Imm. sk.

Linnean Society [P.]. (Type of species.) Salvin-Godman Coll. Tweeddale Coll.

# 3. Calyptorhynchus xanthonotus.

Calyptorhynchus xanthonotus, Gould, P. Z. S. 1837, p. 151; id. Wiegm. Arch. f. Naturg. 1839, p. 395; G. R. Gr. Gen. B. ii. p. 426, n. 8 (1846); Gould, B. Austr. v. pl. 12 (1847); Rehab. Vög. N. Holl. n. 463 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 156, n. 271; id. Naumannia, 1856, Consp. Psitt. n. 284; G. R. Gr. List Psitt. Brit. Mus. p. 99 (1859); Krefft, Ibis, 1863, p. 117 (Sydney); Gould, Handb. B. Austr. ii. p. 22 (1865); G. R. Gr. Hand-list, ii. p. 171, n. 8411 (1870); Diggl. Syn. B. Austr. ii. p. 75 bis (1877); Rehnw. Journ. f. Orn. 1881, p. 33 (Consp. Psitt. p. 33); id. Vogelbild. Nachtr. n. 4 (1883); Legge, Pr. R. Soc. Tasm. 1886, p. 237; Ramsay, Tub. List, n. 478 (note) (1888); Tristr. Cat. Coll. B. p. 72 (1889); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 253 (1889).

Calyptorhynchus xanthotus, Schleg. Journ. f. Orn. 1861, p. 380; id. Dierent. p. 84 (1864); id. Mus. P.-B. Psittaci, p. 155 (1864); id.

op. cit. Revue, p. 70 (1874).

Calyptorhynchus funereus, part., Finsch, Papag. i. p. 357 (1867); Gieb. Thes. Orn. i. p. 551 (partim) (1872); Ramsay, Tab. List, p. 16, n. 478 (partim) (1888).

Calyptorhynchus funereus, var. xanthonotus, Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 459 (1878).

Adult. Exactly like C. funereus in colouring, but smaller in all the dimensions. Total length from 23 to 22 inches, wing from 15 to 14 inches, tail from 11 to 10 inches.

Hab. Tasmania and South Australia.

Although I have kept this species separate from the preceding one, I am not at all sure that I am justified in so doing, as there is the most perfect gradation between the two forms.

c. Imm. sk. Purchased. Australia. d. Imm. sk. Australia (J. T. Cockerell). Salvin-Godman Coll. Tasmania. Lachlan Vale, e. Imm. st. (fould Coll. Hume Coll. f. Imm. sk. Tasmania, March 1867.

g. Imm. sk. Tasmania. R. Gunn, Esq. [P.]. h, i. Imm. sk. Tasmania. Antarctic Exp.

# 4. Calyptorhynchus banksi.

Banksian Cockatoo, Lath. Syn. Av. Suppl. i. p. 63, t. 109 (1787); Cook, Voy. ii. p. 18; Parkins. Voy. p. 144; Lath. Gen. Hist. ii.

p. 199, pl. xxvii. with var. C (1822).

Psittacus banksii, Lath. Ind. Orn. p. 107, n. 76 (young) (1790); Temm. Trans. Linn. Soc. xiii. p. 112 (1819); Bechst. Kurze Uebers. p. 188 (1811); Shaw, Gen. Zool. viii. p. 476 (1811); Kuhl, Consp. Psitt. pp. 12, 90 (1820): Ranz. Elem. di Zool. iii. 2, p. 53 (excl. var.) (1821); Less. Voy. Coq., Zool. i. p. 624 (1828); Voigt, Cuv. Uebers. p. 738 (1831).

Psittaeus magnificus, Shaw, Nat. Misc. pl. 50 (1789-1813).

Banksian Cockatoo, third var., Lath. Syn. Suppl. ii. p. 92 (1802). Cacatna banksii, Vieill. N. D. xvii. p. 8 (1817); id. Enc. Méth. iii. p. 1412 (1823); Schleg. Journ. f. Orn. 1861, p. 379.

Psittacus cooki (part.), Temm. Trans. Linn. Soc. xiii. p. 111 (1819);

Voigt, Cuv. Vebers. p. 738 (1831).

Psittacus leachii, Kuhl, Consp. Psitt. p. 91, tab. iii. (fig. opt.) (1820). Cook's Cockatoo, Lath. Gen. Hist. ii. p. 201, no. 130 (1822).

Psittaens funerous, Less. (nec Shaw) Voy. Coq., Zool. i. p. 624 (1828).

Calyptorhynchus banksi, Viy. & Horsf. Trans. Linn. Soc. xv. p. 271 (1826); Steph. Gen. Zool. xiv. p. 109 (1826); Wagl. Mon. Psitt. p. 686 (1832); Lafr. Mag. de Zool. 1834, p. —, pl. 26; Bourj. Perr. pl. 71 (1837–38); Hartl. Syst. Verz. Ges. Mus. p. 89 (1844); G. R. Gr. Gen. B. ii. p. 426, n. 2 (1846); Gould, B. Austr. v. pl. 7 (1846); Rehnb. Vöy. N. Holl. n. 461 (1853); Bp. Rev. et May. de Zool. 1854, p. 156, n. 274; Sonancé, Rev. et May. de Zool. 1856, p. 225; Bp. Naumannia, 1856, Consp. Psitt. n. 286; Zuchold, Journ. f. Orn. 1858, p. 39; G. R. Gr. List Psitt. Brit. Mus. p. 97 (1859) (syn. emend.); Sclat. Ibis, 1862, p. 285; id. P. Z. S. 1862, p. 141; Schleg. Dierent. p. 83 (1864); Schleg. Mus. P.-B. Psittaci, p. 153 (1864); Gould, Handb. B. Austr. ii. p. 13 (1865); Pelz. Novara Reis., Vög. p. 100 (1865); Ramsay, Ibis, 1866, p. 332; Finsch, Papag. i. p. 345 (1867); G. R. Gr. Hand-list, ii. p. 170, n. 8405 (1870); Gieb. Thès. Orn. i. p. 551 (syn. emend.) (1872); Pelz. Ibis, 1873, p. 33; Garrod, P. Z. S. 1873, p. 634, 1874, p. 587; Schleg. Mus. P.-B. Psittaci, Revue. p. 69 (1874); Ramsay, P. Z. S. 1875, p. 601; Cab. & Rehnw. Journ. f. Orn. 1876, p. 324; Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 454 (1878); Relnev. Vogelbild. t. xii. fl. 6, 7 (1878–83); id. Journ. f. Orn. 1881, p. 33 (Consp. Psitt. p. 33); Salv. Cat. Strickl. Coll. p. 454 (1882); Selat. P. Z. S. 1882, p. 421; id. List Vert. An. 8th ed. p. 315 (1883) Broadb. Pr. R. Soc. Queensl. iv. p. 27 (1887); North, Pr. Linn. Soc. N. S. W. (2) iii. p. 1777 (1888); Ramsay, Tab. List, p. 16, n. 474 (1888); De Vis, Rep. Sc. Exp. N. Queensl. p. 33 (1889). Calyptorhynchus cookii, Vig. & Horsf. Trans. Linn. Soc. xv. p. 272 (1826); G. R. Gr. Gen. B. ii. p. 426, no. 3 (1846).

Banksianus australis, part., Less. Tr. d'Orn. p. 80 (mâle ad., jeune mâle, deuxième et troisième livrée) (1831).

Calyptorhynchus leachii, Wagl. Mon. Psitt. p. 683 (1832); Nitzsch, Pterylogr. (Engl. ed.) p. 102 (1867).

Plyctolophus cookii, Sw. Class. B. ii. p. 302 (1837).

Plyetolophus banksii, Sw. Class. B. ii. p. 302 (1837).

Banksianus banksii, Less. Compl. de Buff. ix. p. 194, pl. 25. f. 1

(1837); id. op. cit. ed. 2, p. 602, pl. — f. 1 (1838). Calyptorhynchus temminckii, Bourj. (nec Kuhl), Perr. pl. 72 (1837–

Adult. Glossy greenish black; crest much lengthened; a broad band of rich deep vermilion across the middle of all but the two central tail-feathers; the external web of the outer tail-feathers and the margin of the external web of the other banded feathers black: bill black; feet mealy brown. Total length 24 inches, wing 17, tail 13.5, bill 1.7, tarsus 0.8.

Female. Glossy greenish black; head and upper wing-coverts spotted with yellow; under surface crossed by narrow irregular bars of pale yellow, which become yellowish red on the under tailcoverts; the red part of the tail interrupted by numerous and irregular black bars, and passing into yellowish red underneath and

into sulphur-yellow on the inner margins of the feathers.

Hab. Eastern Australia, from Port Denison to New South Wales and Victoria.

u. ♀? ad. sk. Linnean Society. (Type of species.) b. ♂? ad. sk. Linnean Society.

(Type of Psittacus cookii, Temm., J.)

Australia (J. T. Cockerell). c. Imm. sk. Salvin-Godman Coll. J. B. Jukes [P.]. d. Ad. sk. Gould Isl., May. J. B. Jukes [P.]. Voyage of H.M.S. e. Imm. sk. Cape Upstart. f. 3 imm. sk.

Percy Isl., December. 'Rattlesnake.' y, h. Ad. & imm. River Darling (Dr. Pechey). Gould Coll.

sk. i. Ad. sk. Australia. Hardwicke Coll.

# 5. Calyptorhynchus macrorhynchus.

Calyptorhynchus macrorhynchus, Gould, P. Z. S. 1842, p. 138 (Port Essington); G. R. Gr. Gen. B. ii. p. 426, n. 7 (1846); Gould, B. Austr. v. pl. 8 (1847); Relmb. Vög. N. Holl. n. 460 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 275; Souancé, Rev. et Mag. de Zool. 1856, p. 225 (= C. banksi); Bp. Naumannia, 1856, Consp. Psitt. n. 287; F. G. R. Gr. List Psitt. Brit. Mus. p. 97 (1859); id. Cat. B. N. Guin. p. 60 (1859); ? Schleg. Dierent. p. 83 (1864); Gould, Handb. B. Austr. ii. p. 16 (1865); G. R. Gr. Hand-list, ii. p. 170, n. 8406 (1870).

Cacatua macrorhyncha, Schleg. Journ. f. Orn. 1861, p. 379.

Calyptorhynchus banksi, part., Finsch, Papay. i. p. 345 (1867); Gieb. Thes. Orn. i. p. 551 (1872); Rehnw. Journ. f. Orn. 1881, p. 33 (Consp. Psitt. p. 33) (partim).

Calyptorhynchus stellatus, Ramsay (nec Wagl.), Pr. Linn. Soc. N.

S. W. ii. p. 193, n. 455 (1878): id. Tab. List, p. 16, n. 475 (1888); De Vis, Rep. Sc. Exp. N. Queensl. p. 33 (1889).

Both males and females are very much like those of *C. banksi*, possessing an equally lengthened crest, but differ in having the bill larger and more powerful, with the mandible much thicker; besides, the wings are shorter, and the female has the coloured part of the tail mingled yellow and scarlet.

Hab. Northern Australia, from Derby to Rockingham Bay.

Whether this bird is truly distinct from *C. banksi* is a question which I am not able to decide, on account of the want of a sufficient number of specimens with the localities and sexes ascertained. The following specimens seem to belong to it:—

a, b. Im		stralia. t Essington.		Capt. Chambers [P.].
Imm.	var. sk.	C		1 2 2
e. Ad. s		Australia (J.	T. Cockerell).	Salvin-Godman Coll.
f. Imm.		t Essington.	2. 000,000,000,000,000	Dr. Sibbald [P.].
g. Imm	. sk. N.	Australia.		Sir T. S. Mitchell P.].
h. Skele				Evton Coll.

### 6. Calyptorhynchus stellatus.

P. Banksian Cockatoo, fifth var., Lath. Syn. Suppl. ii. p. 92 (1802).
Calyptorhynchus stellatus, Wayl. Mon. Psitt. p. 685, t. xxvii. (av. jun.) (1832); G. R. Gr. Gen. B. ii. p. 426, n. 6 (1846); Finsch, Papay. i. p. 351 (1867); G. R. Gr. Hand-list, ii. p. 171, n. 8407 (1870); Gieb. Thes. Orn. i. p. 552 (1872) (syn. emend.); Rehnw. Journ. f. Orn. 1881, p. 34 (Consp. Psitt. p. 34); id. Vogelbild.

Nachtr. n. 5 (1883).

Calyptorhynchùs naso, Gould, P. Z. S. 1836, p. 106; G. R. Gr. Gen. B. ii. p. 426, n. p. (1846); Gould, B. Austr. v. pl. p. (1847); Relnb. Vög. N. Holl. n. 458 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 156, n. 276; Souancé, Rev. et Mag. de Zool. 1856, p. 225; Bp. Naumannia, 1856, Consp. Psitt. n. 288; G. R. Gr. List Psitt. Brit. Mus. p. 98 (partim) (1859); Gould, Handb. B. Austr. ii. p. 17 (1865); ? Müll. P. Z. S. 1869, p. 279 (Melbourne); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 456 (1878); Sclat. P. Z. S. 1882, p. 421; id. List Vert. An. 8th ed. p. 315 (1883); Ramsay, Tab. List, p. 16, n. 476 (1888); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 252 (1889).

Calyptorhynchus maerorhynchus, part., G. R. Gr. List Psitt. Brit. Mus. p. 97 (1859); Schleg. Mus. P.-B. Psittaci, p. 154 (1864).

"The characters by which this species is distinguished from the C. macrorhynchus are a smaller bill and a shorter and more rounded crest. The bill is, moreover, inclined to be gibbous, like that of C. leachii, to which species it also offers a further alliance in its shorter contour and more rounded crest and short tail. Total length 22 inches, bill in height 2.75, wing 14, tail 10.5, tarsus (about) 0.7." (Gould.)

Hab. Western Australia.

The specimens in the Museum are few in number, without having locality or sex marked; I am therefore unable to point out the

exact characters by which this form is to be discriminated from the two preceding ones.

a. Ad. sk. Gould Coll.

b. Ad. sk. Australia. Australia (J. T. Cockerell). Salvin-Godman Coll. c, d. Ad. et imm. sk.

# 7. Calyptorhynchus viridis.

Psittaeus banksii, var. β, Lath. Ind. Orn. i. p. 107 (1790) (var.). Psittaeus banksii, var. γ, Lath. Ind. Orn. i. p. 107 (1790).

Banksian Cockatoo, var. A, Lath. Syn. Suppl. ii. p. 91 (1802); id. Gen. Hist. ii. p. 200 (1822).

Banksian Cockatoo, second var., Lath. Syn. Suppl. ii. p. 92 (1802);

id. Gen. Hist. ii. p. 200 (var. B) (1822). Cacatua viridis, Vieill. N. D. xvii. p. 12 (1817); id. Enc. Méth. iii. p. 1415 (1823); Pucher. Rev. et Mag. de Zool. 1852, p. 563; Hartl. Journ. f. Orn. 1855, p. 422.

Psittacus cookii (part.), Temm. Trans. Linn. Soc. xiii. p. 111 (1819);

Voigt, Cuv. Uebers. p. 738 (1831).

Psittacus solandri, Temm. Trans. Linn. Soc. xiii. p. 113 (1819). Psittacus temminckii, Kuhl, Consp. Psitt. p. 82 (1820) (descr. av. ad.).

Solander's Cockatoo, *Lath. Gen. Hist.* ii. p. 201, n. 129 (1822).

Cook's Cockatoo, Lath. ibid. n. 130.

Calyptorhynchus cookii (part.), Vig. & Horsf. Trans. Linn. Soc. xv. p. 272 (1826); ? Souancé, Rev. et Mag. de Zool. 1856, p. 225. Calyptorhynchus solandri, Vig. & Horsf. Trans. Linn. Soc. xv. p. 274

(1826); Schleg. Mus. P.-B. Psittaci, p. 153 (1864); G. R. Gr. Handlist, ii. p. 171, n. 8408 (1820); Pelz. Ibis, 1873, p. 118; Schleg. Mus. P.-B. Psittaci, Revue, p. 69 (1874); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 457 (1878) (syn. excl.); Rehnw. Vogelbild. t. xii. f. 1 (1878–83); id. Jown. f. Orn. 1881, p. 33 (Consp. Psitt. p. 33); Salv. Cat. Strickl. Coll. p. 454 (1882); Broadb. Pr. R. Soc. Queensl. ii. p. 124 (1885); Pelz. u. Lor. Ann. k. naturh. Hofmus. 1888, p. 40; Ramsay, Tab. List, p. 16, n. 477 (excl. syn.) (1888); Tristr. Cat. Coll. B. p. 72 (1889).

Calyptorhynchus temminckii, Steph. Gen. Zool. xiv. p. 109 (1826);
 Wagl. Mon. Psitt. p. 684 (1832);
 Lafresn. Mag. de Zool. 1834,
 p. —, pls. 27, 28;
 Bourjot, Perr. pl. 12 bis (jun.) (1837–38);
 G. R.

Gr. Gen. B. ii. p. 426, n. 4 (1846).

Banksianus australis, part., Less. Tr. d'Orn. p. 180 (quatrième livrée) (1831).

Calyptorhynchus stellatus, Selby (nec Wagl.), Nat. Libr. vi. p. 134, pl. 15 (1836).

Plyctolophus solandri, Sw. Class. B. ii. p. 302 (1837).

Plyctolophus cookii, Sw. ibid.

Banksianus temminekii, Less. Compl. de Buff. ix. p. 193 (1837); id. op. cit. ed. 2, p. 602 (1838).

Calyptorhynchus banksii, Bourj. (nec Lath.) Perr. pl. 71 bis (ad.) (1837-38).

Calyptorhynchus leachii, Gould (nec Kuhl), B. Austr. v. pl. 10 (1842); Rehb. Vog. N. Holl, n. 459 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 156, n. 273; id. Naumannia, 1856, Consp. Psitt. p. 289; Zuchold, Journ. f. Orn. 1858, p. 39; G. R. Gr. List Psitt. Brit. Mus. p. 98 (syn. emend.) (1859); Schleg. Dierent. p. 83 (1864); Gould, Handb. B. Austr. ii. p. 18 (1365); Pelz. Novara Reis., Vög. p. 100 (1865); Ramsay, P. Z. S. 1875, p. 601; Diggl. Orn. Austr. ii. pl. 74 (young) (1877).

Cacatua leachii, Schleg. Journ. f. Orn. 1861, p. 379.

Calyptorhynchus solanderi, Gieb. Thes. Orn. i. p. 552 (1872).

Adult male. Glossy greenish black; head and neck brown; also the breast and the abdomen are washed with brown; a broad band of deep vermilion across the middle of all but the two centre tailfeathers; the external web of the outer tail-feathers and the margin of the external web of the other banded feathers black: iris very dark brown; orbits nearly black; bill dark horn-colour; feet nearly black. Total length 19.5 inches, wing 14, tail 10, bill 1.9, tarsus 7.5.

Female (?) or immature bird. Differs from the adult in having the scarlet band on the tail more or less tinged with yellow and crossed by narrow black bands; on the head and chin there are

frequently yellow feathers irregularly disposed.

Young. Like the immature bird; the head, the underparts, the upper and under wing-coverts spotted with yellow; sometimes the

under tail-coverts are banded with yellow.

Hab. Eastern Australia, from Cape York to Victoria.

a. Ad. sk.

b. Imm. sk.

 c. ♂ ad. sk. d. Ad. sk. e,f. Ad. et imm. sk. g-i. Imm. sk.

River Murray. Australia. Australia. Australia.

Linnean Soc. [P.]. (Type of Psittacus cookii, Temm., Q.) Linnean Soc. [P.]. (Type of Psittacus solandri, Temm.)

Sir G. Grey [P.]. Purchased. Salvin-Godman Coll. Purchased.

#### 3. CALLOCEPHALON.

C. galeatum.

Type.

C. galeatum.

Corydon, Wagl. (nec Less.) Mon. Psitt. p. 504 (1832) . Callocephalon, Less. in Bougainv. Voy. de la Thétis, p. 311 (1837) (nec Calocephalus, F. Cur.,

Callicephalus, Agass. Nomencl. Zool. Ind. Univ. p. 58

Callocephala, Rchnw. Journ. f. Orn 1881, p. 31. Callocephalus, Salvin, Cat. Strickl. Coll. p. 454 (1882).

Range. Confined to Australia.

# Callocephalon galeatum.

Red crowned Parrot, Lath. Syn., Suppl. ii. p. 369, pl. exl. (1802); id. Gen. Hist. ii. p. 218, pl. 28 (1822).

Psittacus galeatus, Lath. Suppl. Ind. Orn. p. xxiii, n. 13 (1802); Shaw, Gen. Zool. viii. p. 523 (1811); Kuhl, Consp. Psitt. p. 88

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(1820); Ranz. Elem. di Zool. iii. 2, p. 61 (1821); Voigt, Cuv. Uebers. p. 739 (1831).

Psittacus phœnicocephalus, Mus. Paris, fide Kuhl, l. c.

Cacatua galeata, Vieill. N. D. xvii. p. 12 (1817); id. Enc. Méth. iii. p. 1414 (1823); Schleg. Journ. f. Orn. 1861, p. 379; id. Dierent.
 p. 82, with figure on p. 83 (1864); id. Mus. P.-B. Psittaci, p. 142

(1864).

Calyptorhynchus galeatus, Vig. & Horsf. Tr. Linn. Soc. xv. p. 274 (1826); Steph. Gen. Zool. xiv. p. 110 (1826); Less. Man. d'Orn. ii. p. 144 (1828); G. R. Gr. Gen. B. ii. p. 426, n. 10 (1845); id. List Psitt. Brit. Mus. p. 99 (1859); Pelz. Novara Reis., Vög. p. 100 (1865); Finsch, Papag. i. p. 337 (1867); Gieb. Thes. Orn. i. p. 551 (1872); Schleg. Mus. P.-B. Psittaci, Revue, p. 70 (1874); Rchme. Vogelbild. t. xii. f. 2 (1878-83); id. Journ. f. Orn. 1881, p. 31 (*Consp. Psitt.*, p. 31). Banksianus galeatus, *Less. Tr. d'Orn.* p. 181 (1831).

Corydon galeatus, Wagl. Mon. Psitt. pp. 504, 689 (1832); G. R. Gr. List Gen. B. p. 53 (1840).

Plyctolophus galeatus, Sw. Class. B. ii. p. 302 (1837).

Callocephalon australe, Less. Voy. de la Thétis, p. 311, pls. 47, 48 (1837); id. Compl. de Buff., Ois. ix. p. 195 (1837), ed. 2, p. 602 (1838).

Kakadoe rubrogaleatus, Bourj. Perr. pls. 75, 75 bis, 75 ter (1837–38). Callocephalon galeatum, G. R. Gr. List Gen. B. 2nd ed. p. 68 (1841); Gould, B. Austr. v. pl. 14 (1847); Blyth, Cat. B. Mus. A. S. B. p. 1 (1849); Rehnb. Neuentd. Vog. N. Holl. n. 457 (1850); Bp. Consp. i. p. 7 (1850); id. Rev. et Mag. de Zool. 1854, p. 156, n. 269; Souancé, Rev. et Mag. de Zool. 1856, p. 225; Bp. Naumannia, 1856, Consp. Psitt. n. 282; Sclat. P. Z. S. 1859, p. 433; Gould, Handb. B. Austr. ii. p. 29 (1865); G. R. Gr. Hand-list, ii. p. 171, n. 8412 (1870); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 453 (1878); Schmidt, P. Z. S. 1880, p. 309; Sclat. List Vert. An. 8th ed. p. 314 (1883); Legge, Pr. R. Soc. Tasm. 1886, p. 237; Ramsay, Tab. List, p. 16, n. 473 (1888); North, Pr. Linn. Soc. N. S. W. (2) iii, p. 1777 (1888); Tristr. Cat. Coll. B. p. 72 (1889); Rams. Cat. Austr. B., Psittaci, p. 14 (1891).

Psittacus fimbriatus, Grant, fide G. R. Gr. List Psitt. Brit. Mus. p. 99 (1859).

Callicephalus galeatus, Brehm, Thierl., Vög. p. 43 (1865). Callocephalus galeatus, Salv. Cat. Strickl. Coll. p. 454 (1882).

Adult male. Slate-grey; all the feathers, with the exception of the primaries, secondaries, and tail, narrowly margined with greyish white—decided and distinct on the upper, but much fainter on the under surface; pileum, crest, and cheeks fine scarlet; secondaries and outer wing-coverts tinged with greenish on the outer web: bill light horn-colour; feet mealy black; iris blackish brown. length 13.6 inches, wing 4.6, tail 5, bill 1.25, tarsus 0.7.

Female. The crest grey; the quills and the tail-feathers with light grey bars; the feathers of the under surface are margined with sulphur-yellow and dull red; the under tail-coverts have dull yellow

bars (Gould).

Young males. Like the females, but with dull red narrow bars on the pileum; back, uropygium and upper tail-feathers, wing-coverts. scapulars, and secondaries with sulphur-yellow bars.

Hab. South-eastern Australia and Tasmania.

a, b. Imm. sk.		Linnean Society. (Labelled as types of species.)
c. Ad. sk.	Australia.	Purchased.
d. Ad. sk.	Australia.	Hardwicke Coll.
e, f. Imm. sk.		Stevens Coll.
g−i. Ad. et imm. sk.		Tweeddale Coll.
k. 3 ad.; l, m. Ad.	S. Australia.	Salvin-Godman Coll.
et imnı. sk.		
n. 3 ad.	Victoria.	Hume Coll.
o. Imm. sk.		Purchased.

#### 4. CACATUA

1. 0110111 011.	Type.
Plyctolophus, Vieill.* Analyse, pp. 26, 70 (1816) Cacatua, Vieill. N. D. xvii. p. 6 (1817) (ex Brisson,	C. moluccensis.
Orn. iv. p. 204, 1760)	C. alba.
p. 11 (1820).	
Pluetolophus, Nitzsch, Pterylographie, p. 146	
(1840). Plissolophus, Gloger, Gemeinn. Hand- n. Hilfs-	
buch, p. 193 (1842).	
Plictolophus, Le Maout, Hist. Nat. Ois. p. 106 (1853).	
Eolophus, Bp. Rev. et Mag. de Zool. 1854, p. 155.	C. roseicapilla.
Ducorpsius, Bp. Compt. Rend. xliv. p. 537 (1857).	C. ducorpsi. C. leadbeateri.
Lophochroa, Bp. ibid	O. ieaubeateri.
p. 69 (1872)	C. hæmaturopygia.

Range. Australia, Austro-Malay subregion, and the Philippines.

Key to the Species.	
I. Feathers of the crest narrow, with the slender	
point recurved at the extremity.	
a. Crest yellow; cere naked.	
a'. Crest sulphur-vellow.	
a". Feathers of the body white.	
a'''. Larger; wing from 15-13 inches.	
$a^4$ . Naked skin round the eyes white.	galerita, p. 116.
b4. Naked skin round the eyes blue.	triton, p. 118.
b'''. Smaller; wing about 9 inches	parvula, p. 120.
b". Feathers of the body white, slightly	71.
but constantly tinged with sulphur-	
yellow; yellow patch on the ear-	
coverts very conspicuous	sulphurea, p. 121.
b'. Crest orange-yellow	citrinocristata, p. 122.
b. Crest vermilion at the base, with a yellow	, , , , , , , , ,
band in the middle of the vermilion part,	
white at the tip: cere feathered	leadbeateri, p. 123.

<sup>\*</sup> The generic name Plyctolophus, which, according to Sundevall, is not Greek, was abandoned by Vieillot himself.
† Cuvier (Tableau Elém. Hist. Nat. An. p. 236, 1798; Régn. An. i. p. 433, 1817) did not use either Kakadoe or Cacatoes as a Latin generic term, but only as a French name for a section of the genus Psittacus.

T

I. Feathers of the crest broadened, and not recurved at the extremity.  c'. Larger; total length from 20-18 inches; feathers of the crest very long; cere naked.  c''. Crest white  d''. Crest sulphur-yellow  e''. Crest vermilion	alba, p. 124. ophthalmica, p. 125. molvecensis, p. 126.
d <sup>3</sup> . Naked skin round the eyes	gymnopis, p. 127.
nearly circular.  a <sup>8</sup> . Larger; wing 10 inches  b <sup>8</sup> . Smaller; wing 9 inches  d <sup>4</sup> . Lores white  d"". Under tail-coverts pale vermilion, edged with white  y". Under surface rose-colour; upper sur-	sanguinea, p. 128. goffini, p. 129. ducorpsi, p. 129. hæmaturopygia, p. 130.
face grey	roseicapilla, p. 132.

# 1. Cacatua galerita.

Psittacus galeritus, Lath. Ind. Orn. i. p. 109, n. 80 (1790); Bechst.
Kurze Uebers. p. 89 (1811); Shaw, Gen. Zool. viii. 2, p. 479 (1811);
Kuhl, Consp. Psitt. pp. 12, 87 (1820); Voigt, Cuv. Uebers. p. 738 (1831); Hahn, Orn. Atl., Papag. t. 52 (1836); Thienem. Fortpfl. d. ges. Vög. p. 28, tab. xiv. f. 13 (1846).

The crested Cockatoo, White, Journ. p. 237, pl. 26 (1790); Lath. Gen. Syn., Suppl. ii. p. 92 (1801); id. Gen. Hist. ii. p. 205 (1822).

Cacatua galerita, Vieill. N. D. xvii. p. 11 (1817); id. Enc. Méth. iii. p. 1414 (1823); Wagl. Mon. Psitt. p. 694 (1832); Gould, B. Austr. v. pl. 1 (part x., 1843); Hartl. Syst. Verz. Ges. Mus. p. 88 (1844); G. R. Gr. Gen. B. iii. p. 425, n. 6 (1845); Blyth, Cat. B. Mus. A. S. B. p. 2 (1849); Rchub. Neuentd. Vög. N. H. n. 188 (1850); Bolle, Journ. f. Orn. 1856, p. 170; Elsey, P. Z. S. 1857, p. 26; Zuchold, Journ. f. Orn. 1858, p. 39; G. R. Gr. List Psitt. Brit. Mus. p. 94 (1859); id. Cat. B. New Guin. p. 60 (1859); Sclat. P. Z. S. 1860, p. 415; Schleg. Jaarb. Natura Art. Mag. p. 182 (1861); id. Journ. f. Orn. 1861, p. 378; Sclat. P. Z. S. 1864, p. 188; Schleg. Mus. P.-B. Psittaci, p. 134 (1864); id. Dierent. p. 82 (1864); Gould, Handb. B. Austr. ii. p. 2 (1865); Ramsay, Ibis, 1866, p. 332; Schleg. Ned. Tijdschr. Dierk. iii. p. 320 (1866); Huxley, P. Z. S. 1867, p. 443 (skull); G. R. Gr. Hand-list, ii. p. 169, n. 8391 (1870); Garrod, P. Z. S. 1875, p. 466, 634, 1874, pp. 587, 588, 591; Sclat. P. Z. S. 1875, p. 60 (note); Ramsay, P. Z. S. 1875, p. 601; Garrod, P. Z. S. 1876, p. 419; Masters, Pr. Linn. Soc. N. S. W. ii. p. 274 (1878); Moscley, Not. Chall. p. 352 (1879); Schmidt, P. Z. S. 1880, p. 309; Salvin, Cat. B. Strickl. Coll. p. 453

(1882); Sclat. List Vert. An. 8th ed. p. 309 (1888); Broadb. Pr. (1882); Sctat. List Vert. An. 8th ed. p. 309 (1888); Broadb. Fr. R. Soc. Queensl. ii. p. 154 (1885), iii. p. 30 (1886), v. p. 26 (1887); Ramsay. Tab. List, p. 15, n. 467 (1888); Tristr. Coll. B. p. 72 (1889); Cox & Hamilt. Pr. Linn. Soc. N. S. W. (2) iv. p. 416 (1889); De Vis, Rep. Sc. Exp. N. Queensl. p. 33 (1889); North, Descr. Nests & Eygs Austr. Birds, p. 250 (1889); Rams. Cat. Austr. B., Psittaci, p. 1 (1891).

Plyetolophus galeritus, Vig. & Horsf. Tr. Linn. Soc. xv. p. 268 (1826); Lear, Parr. pl. 3 (1832); Steph. Gen. Zool. xiv. p. 108 (1826); Gould, Syn. B. Austr. pl. — (183–?); Bp. Rev. et Mag. de Zool. 1854, p. 156, p. 265; id. Naumannia, 1856 Compn. Psitt

de Zool. 1854, p. 156, n. 265; id. Naumannia, 1856, Consp. Psitt. no. 277; Souancé, Rev. et May. de Zool. 1856, p. 255; Rosenb. Journ. f. Orn. 1864, p. 115 (part.); Nitzsch, Pterylogr. (Engl. ed.) p. 102 (1867).

Cacatua chrysolophus (part.), Less. Tr. d'Orn. p. 182 (1831).

Cacatoes galeritus, Guér. Icon. Règn. An., Ois. p. 23, pl. 36. f. 2 (1829-44).

Kakadoë sulfureus major vel australensis, Bourj. Perr. pl. 79 (1837-

Plyetolophus liemetorhynchus, Bp. Compt. Rend. xxx. p. 139 (1850); id. Rev. et Mag. de Zool. 1854, p. 156, n. 266; id. Naumannia, 1856, Consp. Psitt. n. 279.

Cacatua liemetorhyncha, G. R. Gr. List Psitt. Brit. Mus. p. 94 (1859); Pelz. Novara Reis., Vög. p. 99 (1865); G. R. Gr. Handlist, ii. p. 170, n. 8397 (1870).

Cacatua galeritus, Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xxi

(1863).

Plyctolophus galeritus, Finsch, Papag. i. p. 286 (1867); Gulliv. P. Z. S. 1875, p. 490; Gieb. Thes. Orn. iii. p. 229 (1877); Rehnw. Vogelbild. t. iv. f. 5 (1878-83); Legge, Pr. R. Soc. Tasm. 1886, p. 237.

Plictolophus galerita, Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 192,

n. 445 (1878).

Plissolophus galeritus, Rchnw. Journ. f. Orn. 1881, p. 30 (Consp. Psitt. p. 30).

Adult. White, crest sulphur-yellow; base of the inner web of quills and tail-feathers pale sulphur-yellow, like the base of the feathers of the head and neck; ear-coverts sometimes tinged with sulphur-yellow; naked skin round the eyes white: iris dark brown; bill black; feet blackish. Total length 20-18 inches, wing 15-13.5, tail 8.5-7.5, bill 2-1.7, tarsus 1.15-1.1.

Hab. Australia and Tasmania.

I have not been able to examine specimens from Tasmania, which, on account of some little differences in the shape of the bill. have been specifically separated as C. licmetorhyncha (Bp.). Two specimens, mentioned below, have the hook of the bill decidedly longer and straighter.

a, b. Ad. sk.	Australia,	Salvin-Godman Coll.
c. Ad. sk.	Australia.	Purchased.
d. Ad. sk.	Cape York.	Gould Coll.
e. Ad. sk.	Port Essington.	Capt. Chambers [P.].
f. Ad. sk.	N.W. Australia (Jan.).	J. R. Elsey, Esq.
		{P.].
y, h. ♂♀ad. sk.	River Murray (Oct., Nov.).	Sir G. Grev [P.].

i. Ad. sk. k. ♂ ad. sk., var. l. Skeleton. m. Bones of the head.

S. Australia. New South Wales.

Wallace Coll. Purchased. T. C. Eyton Coll.

### 2. Cacatua triton.

Psittacus galeritus, part., Less. Voy. Coq., Zool. i. p. 624 (1828); id. Tr. d'Orn. p. 182 (spec. ex Nov. Guin.) (1831); id. Compl. de Buff., Ois, p. 602 (part.) (1838); S. Müll. Verh. Land- en Volkenk. pp. 21, 107 (1839–44).

Psittacus sulphureus, Less. (nec Gm.) Voy. Coq., Zool. i. p. 625 (1828). Psittacus triton, Temm. Coup d'ail yén. sur les poss. néerl. dans l'Inde archip. iii. p. 405 (note) (1844) (Aidouma Isl.) (type examined).

Plyctolophus sulphureus, Bp. (nec Gm.) Compt. Rend. xxx. p. 138 (1850).

Plyctolophus luteocristatus, Bp. l. c.

Plyctolophus triton, Bp. l.c. p. 139; id. Rev. et Mag. de Zool. 1854, p. 156, sp. 264; id. Naumannia, 1854, Consp. Psitt. sp. 278; id.

Compt. Rend. xliv. p. 537 (1857).

Cacatua cyanopis, Blyth, Journ. As. Soc. Beng. xxv. p. 447 (1856). Cacatua cyanopis, bylin, south. Be. Soc. Belg. Axv. p. 11 (2008). Cacatua triton, Sclat. Journ. Pr. Linn. Soc. ii. p. 166, sp. 120 (1858); G. R. Gr. P. Z. S. 1858, pp. 184, 195; id. Cat. B. New Guin. pp. 43, 60 (1859); id. P. Z. S. 1859, p. 159; id. List Psitt. Brit. Mus. p. 94 (1859); Sclat. P. Z. S. 1860, pp. 227, 371; Wall. Dis, 1861, pp. 187, Except. Visit. Mus. p. 94 (1859); Sciat. F. Z. S. 1800, pp. 221, 511; Walt. 1018, 1861, p. 286; G. R. Gr. P. Z. S. 1861, p. 437; Finsch, Ned. Tijdschr. Dierk, i. Berigten, p. xxii (1863); Sclat. P. Z. S. 1864, pp. 160, 188; Wall. P. Z. S. 1864, pp. 280, 293; Schleg. Dierent. p. 82 (1864); id. Mus. P.-B. Psittaci, p. 133 (1864); Sclat. Ann. & Mag. N. H. (3) xv. p. 74 (1865); Finsch, Neu-Guin. p. 159 (1863); Schleg. Ned. Tijdschr. Dierk. iii. pp. 320, 321 (1866); Rosenb. Reis naar de Zuidoostereil. pp. 13, 19, 48 (1867); G. R. Gr. Hand-list, ii. p. 169, n. 8387 (1870); Rosenb. Reist. naar Geelvinkb. pp. 36, 56, 83, 113 (1875); Salvad. Ann. Mus. Civ. Gen. vii. p. 753 (1875), ix. p. 11 (1876), x. p. 24, n. 1 (1877); D'Alb. Sydn. Mail, 1877, p. 248; id. Ann. Mus. Civ. Geu. x. p. 19 (1877); Rosenb. Zool. Gart. 1878, p. 347; D'Alb. & Salvad. Ann. Mus. Civ. Gen. xiv. p. 28 (1879); Ransay, Pr. Linn. Soc. N. S. W. iii. p. 250, 16 (1870); Rosenb. Mally Arabis pn. 271, 296 (1870). n. 16 (1879); Rosenb. Malay. Archip. pp. 371, 396 (1879); Kalvad. Orn. Pap. e Mol. i. p. 94 (1880); Finsch, Vög. der Südsee, p. 38 (partin?) (1884); Sharpe, Gould's B. New Guile, pt. xx. pl. 2 (1885); Nehrk. Journ. f. Orn. 1885, p. 31; Guillem. P. Z. S. 1885, p. 618; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 154 (1889); Tristr. Cat. Coll. B. p. 72 (1889); Salvad. Ann. Mus. Civ. Gen. (2) ix. p. 557 (1890); id. Aggiunte, p. 215 (1891).

Cacatua æquatorialis, G. R. Gr. (nec Temm.) P. Z. S. 1861, p. 437

(N. Guinea, Mysol).

Plyctolophus macrolophus, Rosenb. Nat. Tijdschr. Ned. Ind. xxiii. p. 45 (1861); id. Journ. f. Orn. 1861, p. 45 (Mysol and Salwatty). Plyctolophus aquatorialis, Rosenb. Journ. f. Orn. 1862, p. 63 (Mysol and Salwatty); id. Nat. Tijdschr. Ned. Ind. xxv. pp. 142, 143 (1863); id. Journ. f. Orn. 1864, p. 116, sp. 37.

Plyctolophus triton, Rosenb. Journ. f. Orn. 1862, pp. 63, 64, 65 (Waigiou, New Guinea, Aru Isl.); id. Nat. Tijdschr. Ned. Ind. xxv. pp. 143, 144, 145 (1863); id. Journ. f. Orn. 1864, p. 115; Bernst. Nat. Tijdschr. Ned. Ind. xxvii. p. 297 (1864).

Cacatua eleonora, Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xxi

(1863).

Cacatna macrolopha, Wall. P. Z. S. 1864, pp. 280, 293 (Aru Isl., Mysol, Waigion, and Salwatty); Schleg. Dierent. p. 82 (1864); Finsch, Neu-Guin. p. 159 (1865); G. R. Gr. Hand-list, ii. p. 109, n. 8393 (1870); Tristr. Cat. Coll. B. p. 72 (1889).

Cacatua galericulata, Rosenb. (nec Lath.) Reis naar de Zuidoostereil.

pp. 99, 100 (1867).

Phetolophus triton, Finsch, Papry, i. p. 291 (1867), ii. p. 941 (1868); Meyer, Sitzh. Isis zu Dresd. 1875, p. 75; Sharpe, Journ. Linn. Soc., Zool. xiii. p. 490, sp. 9 (1878); Rehnw. Vogelbild. in the text of pl. iv. (1878–83).

Plissolophus triton, Rehnw. Journ. f. Orn. 1881, p. 30 (Consp. Psitt.

р. 30).

Cacatua galerita, Ramsay (nec Lath.), Pr. Linn. Soc. N. S. W. iv. pp. 91, 96 (1879); Sharpe, Report 'Alert,' Birds, p. 25 (Hammond Island, Torres Straits) (?) (1888); Ramsay, Tab. List, p. 15 (partim) (1888).

Cacatua trobriandi, Finsch, Samoafahrten, p. 208 (1888).

Adult. Like C. galerita, from which it differs in having the naked skin round the eyes blue, and also in the dimensions, which are generally smaller. Total length 18 inches, wing 13, bill 1.70, tarsus 1.10.

Female. Smaller than the male.

Hab. The Papuan Islands—New Guinea, Mafor, Mysori, Jobi, Miosnom, Waigiou, Salwatty, Guebeh, Mysol, Aru Islands, Trobriand and Normanby Islands, Louisiade Isl.; and the Moluccan Islands,

Goram and Monawolka, where it has been imported.

The specimens from the Western Papuan Islands (Waigiou, Salwatty, and Mysol), and especially from the Aru Islands, are generally smaller than those from the mainland, and have even been separated specifically as *C. macrolopha*, Rosenb.; but I do not think that we are justified in accepting this view, especially when we consider the great range of individual variation. Also the birds from the Trobriand Islands have been separated by Dr. Finsch as *Cacatua trobriandi*, but he writes to me that now he considers this name only a synonym of *C. triton*.

The specimen procured during the voyage of the 'Alert,' mentioned below, seems to belong to C. triton, but I suspect that it has

been imported into Hammond Island.

a, b. Ad. sk.
c. Ad. sk.
d. Ad. sk.
e. ♂ ad. sk.
f. ♀ ad. sk.
y. ♀ ad. sk.
h. ♀ ad. sk.
i. Ad. sk.
k. Ad. sk.
l. ♀ ad. sk.

Dorey.
Dorey (A. R. Wallace).
Waigiou.
Salwatty (July).
Salwatty (July).
Mysol.
Mysol (A. R. Wallace).
Aru Islands.
Goram.
Hammond Island, Torres
Straits (Aug.).

Wallace Coll.
Gould Coll.
Wallace Coll.
Gould Coll.
Tweeddale Coll.
Wallace Coll.
Gould Coll.
Wallace Coll.
Gould Coll.
Vallace Coll.
Gould Coll.
Voy. H.M.S. 'Alert.'

### 3. Cacatua parvula.

Petit Kakatoes à hupe (sic) jaune, D'Aubent. Pl. Enl. 14.

Le Kakatoës à huppe jaune, Buff. Hist. Nat. Ois. vi. p. 93 (partim)

(1779).

Psittacus sulphureus, Ranz. Elem. di Zool. iii. 2, p. 57 (1821);
 Hahn (nec Gru.), Orn. Atl., Papag. t. 32 (nec descr.?) (1835);
 Voigt, Cuv. Uebers. p. 737 (1831); Temm. Tabl. Méth. p. 56 (1839); id. Coup d'wil gén. Ind. Arch. p. 405 (note) (1849).

Plyctolophus parvulus, Bp. Compt. Rend. xxx. p. 139 (1850)\*; id.

Naumanniu, 1856, Consp. Psitt. n. 275.

Plyctolophus parvus, Bp. Rev. et Mag. de Zool. 1854, p. 156, n. 261.

Cacatua parvula, G. R. Gr. List Psitt. Brit. Mus. p. 94 (1859); id.

Hand-list, ii. p. 169, n. 8396 (1870).

Cacatua æquatorialis, Solat. (nec Temm.) P. Z. S. 1860, p. 226 (Lombock).

Plyctolophus citrinus, Rosenb. Journ. f. Orn. 1862, pp. 66, 68 (Timor);

id. Nat. Tijdschr. Ned. Ind. xxv. pp. 146, 148 (1863).

Cacatua sulphurea, Wall. P. Z. S. 1863, p. 484 (partim?); Sclat. P. Z. S. 1864, p. 188 (partim); Wall. P. Z. S. 1864, pp. 280, 293; Schleg. Dierent. p. 82 (partim) (1864); id. Mus. P.-B. Psittaci, p. 137 (partim) (1864); Guillem. P. Z. S. 1885, p. 502 (Sumbaya).

Cacatua sulphureus, Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xxii

(1863) (from Timor only).

Plictolophus buffoni, Finsch, Papag. i. p. 300 (1867); Rehnw. Vogelbild. in the text of pl. iv. f. 1 (1878-83).

Plyctolophus (?) timorensis, Souancé, fide G. R. Gr. Hand-list, ii.

p. 169 (1870).

Plissolophus buffoni, Rehnw. Journ. f. Orn. 1881, p. 30 (Consp. Psitt. p. 30).

Adult. Like C. triton in colouring, but very much smaller; the yellow patch on the ear-coverts is more distinct and it is always present; naked skin round the eyes white (?): bill and feet black. Total length 12.5 inches, wing 9, tail 4.3, bill 1.25, tarsus 0.7.

Hab. Timor Group: Timor, Semao, Lombock, Flores, Sumbava. I have seen specimens from Timor, Lombock, Sumbava, and Flores, and they certainly belong to the same species; therefore, I think that Dr. Finsch was not right in attributing the Lombock and Flores birds to C. sulphurea, which is confined to the Celebes group.

a, b. ♂♀ad. sk. c, d. ♂♀ad. sk. e.♀ad. sk. f. Ad. sk. g. Ad. sk.	E. Timor. Lombock. Lombock (A. R. Wallace). Flores (A. R. Wallace). Flores.	Wallace Coll. Wallace Coll. Gould Coll. Gould Coll. Wallace Coll.
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<sup>\*</sup> Schlegel (Mus. P.-B., Psittaci, p. 137) states that the type of Pl. parvulus, Bp., is a specimen from Semao, near Timor, collected by S. Müller.

# 4. Cacatua sulphurea.

Avis Kakatoeha, *Seba*, *Thes.* i. t. 59. f. 1 (1734).

Psittacus albus galeritus, Frisch, Av. pl. 50 (1743).

Cacatua luteo-cristata, Briss. Orn. iv. p. 206 (1700); Schleg. Dierent. p. 82 (partim) (1864).

Lesser White Cockatoo, Edw. Glean. iii. p. 317 (1764); Lath. Syn. i.

p. 258 (1781); id. Gen. Hist. ii. p. 206 (1822).

Psittacus sulphureus, Gm. S. N. i. p. 330, n. 94 (1788) (ex Brisson); Lath. Ind. Orn. i. p. 109 (1790); Bechst. Lath. Uebers. p. 89 (1811); Shaw, Gen. Zool. viii. p. 480, pl. 73 (1811); Kuhl, Consp. Psitt. p. 87 (1820); Less. Voy. Coq., Zool. i. p. 373 (1826); Hahn, Orn. Att., Papag. p. 47 (nec tab. 32) (1835); Pubois, Orn. Gal. pl. 83 (1839); S. Müll. Verh. Land- en Volkenk. p. 181 (1839-44).

Cacatua sulphurea, Vieill. N. D. xvii. p. 10 (1817) (partim); id. Enc. Méth. iii. p. 1413, pl. 225. f. 2 bis (1823); Less. Tr. d'Orn. p. 182 (partim) (1831); Wayl. Mon. Psitt. p. 695 (partim) (1832); Hartl. Syst. Verz. Ges. Mus. p. 88 (1844); G. R. Gr. Gen. B. iii. p. 425, n. 7 (partim) (1845); P. Blyth, Cat. B. Mus. A. S. B. p. 2 (1849); Horsf. & Moore, Cat. B. Mus. E. I. Comp. ii. p. 607 (1858); G. R. Gr. List Psitt. Brit. Mus. p. 93 (1859); Selat. P. Z. S. 1802, p. 322, 1864, p. 188 (partim); Schleg. Mus. P.-B. Psittaci, p. 137 (partim) (1864); id. Ned. Tijdschr. Dierk. iii. pp. 320, 321 (partim) (1866); Fraser, P. Z. S. 1865, p. 227; Wald. Tr. Zool. Soc. viii. p. 30 (1872); Garrod, P. Z. S. 1873, pp. 459, 461, 465, 466, 1874, pp. 587, 588, 591, 595; Salvad. Ann. Mus. Civ. Gen. vii. p. 644 (1875); Meyer, Ibis, 1879, p. 44 (Celebes, Buton), p. 145 (Togian Isl.); Ottley, P. Z. S. 1879, p. 462; Tweedd. Orn. Works, p. 134 (1881); Sclat, List Vert. An. 8th ed. p. 310 (1883); Blas. Zeitschr. f. ges. Orn. iii. p. 195 (1886); Meyer, Vogel-Skelett. t. xviii. (1878-89); Tristr. Cat. Coll. B. p. 72 (1889).

Plyctolophus sulphureus, Lear, Ill. Parrots, pl. 4 (1832); Selby, Nat. Libr., Parrots, p. 129, pl. 14 (1836); Sw. Class. B. ii. p. 302 (1837); Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 259; id. Naumannia, 1856, Consp. Psitt. n. 273; Souancé, Rev. et Mag. de Zool. 1856, p. 225; Nitzsch, Pterylogr. (Engl. ed.) p. 102 (1867).

Psittacus sulphureus minor vel moluccensis, Bowjot, Perr. t. 80

(1837-38).

Cacatua equatorialis, Temm. Coup d'œil gén. Ind. Arch. iii. p. 405 (note) (1849); Schleg. Jaarb. Nat. Artis Magistra, 1861, p. 182 (part.); id. Journ. f. Orn. 1861, p. 378 (partim); Sclat. P. Z. S. 1864, p. 188 (partim); Wall. P. Z. S. 1864, pp. 280, 293; G. R. Gr. Hand-list, ii. p. 169, n. 8395 (1870).

Plyctolophus æquatorialis, Bp. Compt. Rend. xxx. p. 139 (1850); id. Rev. ct Mag. de Zool. 1854, p. 155, n. 260; id. Naumannia, 1856,

Consp. Psitt. n. 274.

? Cacatua sulphurata, G. R. Gr. P. Z. S. 1860, p. 358 (Bourou!). Plyctolophus sulfureus, Rosenb. Journ. f. Orn. 1862, p. 60; id. Nat. Tijdschr. Ned. Ind. xxv. p. 139 (1863).

Cacatua luteocristatus, Finsch, Ned. Tijdschr. Dierk. i. Berigten,

p. xxii (1863).

Phictolophus sulphureus, Finsch, Papag. i. p. 296 (1867), ii. p. 942 (1868); Gulliver, P. Z. S. 1875, p. 490; Gieb. Thes, Orn. iii. p. 230 (1877); Rehnw. Vogelbild. t. iv. f. 1 (1878-83).

Plissolophus cristatus, Rehnw. (nec Linn.) Journ. f. Orn. 1881, p. 29

(Consp. Psitt. p. 29).

Adult. Similar to C. parvula both in size and coloration, but all the feathers have a distinct yellow tinge, the patch on the ear-coverts is of a deeper yellow and more conspicuous, and the bill is generally, but not always, stronger. Total length 13 inches, wing 9.5, tail 4.4, bill 1.5, tarsus 0.8.

Hab. Celebes, Buton, and Togian Islands.

a. Ad. st. Moluccas. E. Bartlett, Esq. [C.]. b, c. Ad. sk. Celebes. Salvin-Godman Coll. d, e. Ad. sk. Celebes (A. B. Meyer). Tweeddale Coll. Tanette, S. Celebes (A. B. Gould Coll. f. ♀ ad. sk. Meyer). g. 3 ad. sk. Buton Island (A. B. Meyer). Tweeddale Coll. h. Ad. sk. Purchased. Moluccas. *i*. Ad. sk. Rajah Brooke [P.]. k. Ad. sk. [Timor.] Purchased. 1. Skeleton.

### 5. Cacatua citrinocristata.

Plyctolophus citrinocristatus, Fras. P. Z. S. 1844, p. 38; id. Ann. & Mag. N. H. xiv. p. 452 (1844); Bp. Compt. Rend. xxx. p. 138 (1850); id. Rev. et Mag. de Zool. 1854, p. 156, n. 263; id. Naumannia, 1856, Consp. Psitt. n. 276; Souancé, Rev. et Mag. de Zool. 1856, p. 225, n. 190; Bp. Compt. Rend. xliv. p. 537 (1857).

Cacatois à huppe orangée, Hombr. & Jacq. Voy. Pôle Sud, Atlas, pl. 26. f. 2 (1845?) (type examined).

acatua citrino-cristata, G. R. Gr. Gen. B. ii. p. 245, n. 8 (1845); Fraser, Zool. Typ. pl. 58 (1849); Jacq. & Pucher. Voy. Pôle Sud, Zool. i. p. 109 (1853); Hartl. Jowrn. f. Orn. 1854, p. 165; Bolle, Journ. f. Orn. 1856, p. 170; G. R. Gr. List Psitt. Brit. Mus. p. 93 (1859); Sclat. P. Z. S. 1860, p. 226 (Timor); Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xxii (1863); Sclat. P. Z. S. 1862, pp. 160, 188; Wall. P. Z. S. 1864, p. 280; Schley. Mus. P.-B. Psittaci, p. 142 (1864); id. Dierent. p. 82 (1864); Finsch, Neu-Guin. p. 159 (1865); Sclat. Ann. & Mag. N. H. (3) xv. p. 74 (1865); Schley. Ned. Tijdschr. Dierk. iii. p. 319 (1865); G. R. Gr. Hand-list, ii. p. 169, n. 8389 (1870); Schley. Mus. P.-B. Psittaci, Revue, p. 66 (1874); Salvad. Ann. Mus. Civ. Gen. x. p. 24, n. 2 (1877); Rosenb. Zoolog. Garten, 1878, p. 347; Salvad. Orn. Pap. e Mol. i. p. 98 (1880); Meyer, Verh. z.-b. Gesellsch. Wien. 1881, p. 761 (Sumba); Salvad. Orn. Pap. e Mol. iii. p. 513 (1882); Sclat. List Vert. An. 8th ed. p. 310 (1883); Meyer, Vogel-Cacatua citrino-cristata, G. R. Gr. Gen. B. ii. p. 245, n. 8 (1845); (1882); Sclat. List Vert. An. 8th ed. p. 310 (1883); Meyer, Vogel-Skelett. Taf. xix. (1878–89); Sclat. P. Z. S. 1883, p. 58; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 154 (1889).

Psittacus chrysolophus, Temm. in Mus. Lugd. (Bp. Compt. Rend.

xxx. p. 138) (1850).

Plyctolophus croceus, Homeyer, Journ. f. Orn. 1800, p. 357.

Cacatua chrysolopha, Schleg. Jaarb. Natur. Art. May. 1861, p. 183; id. Journ. f. Orn. 1861, p. 378.

Plyctolophus chrysolophus, Rosenb. Journ. f. Orn. 1862, p. 66; id.

Nat. Tijdschr. Ned. Ind. xxv. p. 146 (1863). Plictolophus citrino-cristatus, Finsch, Papag. i. p. 303 (1867); Rehnw. Vogelbild, t. iv. f. 2 (1878–83).

Plictolophus citrinocapillus (errore), Finsch, Papay. ii. p. 639 (1868); Rehnw. Vogelbild. t. iv. f. 2 (1878-83).

Plissolophus citrinocristatus, Rehnw. Journ. f. Orn. 1881, p. 29 (Consp. Psitt. p. 29).

Adult. White; crest yellow-orange; ear-coverts tinged with vellow; base of the feathers of the head and neck, and of the inner web of the quills and tail-feathers, sulphur-yellow; naked ring round the eyes whitish grey: bill and feet black; iris dark brown. Total length 14 inches, wing 9.5, tail 5, bill 1.4, tarsus 0.7.

Hab. Sumba.

a. Ad. st. Timor? Purchased. Timor-laut?] (Purchased at Wallace Coll.  $b. \subsetneq ad. sk.$ Surabaya.) Tweeddale Coll. c. Ad. sk. [Moluccas.]

d. Skeleton.

#### 6. Cacatua leadbeateri.

Plyetolophus leadbeateri, Vig. P. Z. S. 1831, p. 61; id. Philos. Mag. x. p. 55 (1831); Lear, Parrots, pl. v. (1832); Selby, Nat. Libr., Parrots, p. 126, pl. 13, and frontisp. (1836); Mitch. Trav. in Austr. ed. 2, fig. p. 47 (1838); Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 258; id. Naumannia, 1856, Consp. Psitt. n. 272; Souancé,

Rev. et Mag. de Zool. 1856, p. 225. Cacatua leadbeateri, Wagl. Mon. Psitt. p. 692 (1832); Less. Compl. de Buff., Ois. p. 603 (1838); Gould, Syn. B. Austr. pl. — (head) (183-?); Gould, B. Austr. v. pl. 2 (pt. x., 1843); G. R. Gr. Gen. B. iii. p. 425, n. 3 (1845); Rehnb. Newentd. Vog. N. Holl. no. 189 (1850); Bolle, Journ. f. Orn. 1856, p. 170; Diggl. Orn. of Austr. ii. pl. 71 (1857); G. R. Gr. List Psitt. Erit. Mus. p. 95 (1859); 11. pl. 71 (1897); G. R. Gr. List Tsitt. Litt. Mus. p. 95 (1859); Sclat. P. Z. S. 1864, p. 188; Schleg. Mus. P.-E. Psittaci, p. 141 (1864); id. Dievent. p. 82 (1864); Gould, Handb. B. Austr. ii. p. 5 (1865); Schleg. Mus. P.-B. Psittaci, Revue, p. 66 (1874); Garrod, P. Z. S. 1874, pp. 587, 588, 591, 1876, p. 419; Diggl. Syn. Austr. B. ii. p. 71, pl. 71 (1877); Schmidt, P. Z. S. 1880, p. 309; Sch. List List Line for the St. Sch. 1874, pp. 510 (1888). Paragraphy. Sclat. List Vert. An. 8th ed. p. 310 (1888); Ransay, Tab. List, p. 15, n. 468 (1888); Tristr. Cut. Coll. B. p. 72 (1889); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 251 (1889); Ransay, Cat. Austr. B., Psittaci, p. 3 (1891).

Plyctolophus erythropterus, Sw. Class. B. ii. p. 302 (1837). Kakadoë crista tricolorata, Bourjot, Perr. pl. 72 (1837-38).

Leadbeater's Cockatoo, Elsey, P. Z. S. 1857, p. 26.

 Lophochroa leadbeateri, Bp. Compt. Rend. xliv. p. 537 (1857);
 Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xxii (1863);
 G. R. Gr. Hand-list, ii. p. 170, n. 8899 (1870).
 Plictolophus leadbeateri, Finsch, Papag. i. p. 304 (1867);
 Gieb. Thes. Orn. iii. p. 229 (1877);
 Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 192, n. 446 (1878);
 Refinev. Vogelbild. t. iv. f. 6 (1878-83). Plissolophus leadbeateri, Rchnw. Journ. f. Orn. 1881, p. 28 (Consp.

Psitt. p. 28).

Adult. Pileum, back, wings, tail, and under tail-coverts white: forehead, sides of the head, neck, breast, and abdomen tinged with rose-colour, becoming very bright under the wings and at the base of the inner web of the tail-feathers; feathers of the occipital crest vermilion at the base, with a yellow spot or band in the centre, and white at the tip: bill light horn-colour; feet blackish; naked skin round the eyes light grey; iris brown. Total length 16 inches, wing 11, tail 6.3, bill 1.3, tarsus 0.95.

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Female. A little smaller than the male, and not so brightly coloured.

Hab. South Australia, from New South Wales, through the Interior to Victoria and S.W. Australia.

Australia. Zoological Society's Coll. a. Ad. sk. (Type of species.) b. Ad. st. Sir T. Mitchell [P.]. Australia. c. Ad. sk. Australia. Sir G. Grey [P.]. Sir G. Grey [P.]. Gould Coll. d. Ad. sk. River Murray (Nov.). *e−h*. Ad. sk. Capt. Sturt [P.]. Capt. Sturt [P.]. i. Ad. sk. Lake Bonney (Sept.). k. Ad. st. S. Australia. l. Ad. sk. Australia. Salvin-Godman Coll. New South Wales. Hume Coll. m. Ad. sk. n. Skeleton.

# 7. Cacatua alba. = cristata

Psittacus albus cristatus, Aldrov. Orn. i. p. 668 (1646).

Psittaeus albus eristatus, Aldrov. Orn. 1, p. 668 (1646).
Cacatua, Briss. Orn. iv. p. 204, pl. xxi. (1760).
Psittaeus eristatus, Linn. S. N. i. p. 143, n. 22 (deser. errata\*) (1760);
Bodd. Tabl. Pl. Enl. p. 16 (1783); Gm. S. N. i. p. 331, n. 22 (deser. errata) (1788); Lath. Ind. Orn. i. p. 108, n. 77 (deser. errata) (1790); Bechst. Uebers. p. 88 (1811); Kuhl, Consp. Psitt. p. 86 (1820); Ranz. Elem. di Zool. iii. 2, p. 59 (1821); Vieill. Enc. Méth. iii. p. 1413 (deser. errata) (1823); Voigt, Cuv. Uebers. p. 737 (1831); Hahn, Orn. Atlas, Papag. t. 69 (1837); S. Müll. Verh. Land- en Volkenk. p. 107 (1839–44); Hartl. Syst. Verz. Ges. Mus. p. 88 (1844) Mus. p. 88 (1844).

Kakatoës des Moluques, D'Aubent, Pl. Enl. 263.

Psittacus albus, P. L. S. Müll. S. N., Suppl. p. 76, n. 50 (1776); Cass. Proc. Ac. Nat. Sc. Philad. 1864, p. 239, n. 50.

Kakatoës à huppe blanche, Buff. Hist. Nat. Ois. vi. p. 92 (1779). Great White Cockatoo, Lath. Syn. i. p. 256, n. 61 (1781); id. Gen.

Hist. ii. p. 203 (1822).

Cacatua cristata, Vieill. N. D. xvii. p. 10 (1817); Wagl. Mon. Psitt. p. 693 (1832); G. R. Gr. Gen. B. ii. p. 425, n. 5 (1845); Blyth, Cat. B. Mus. A. S. B. p. 1 (1849); Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 254; id. Naumannia, 1856, Consp. Psitt. n. 267; Sonancé, Rev. et Mag. de Zool. 1856, p. 224; Bolle, Journ. f Orn. 1856, p. 170; Bp. Compt. Rend. xliv. p. 537 (1857); G. R. Gr. List Psitt. Brit. Mus. p. 93 (1859); Selat. P. Z. 8, 1860, pp. 226, 227; C. P. C. P. Z. 8, 1860, pp. 285, Schat. P. Z. 8, 1860, pp. 226, pp. 276, pp. 227; G. R. Gr. P. Z. S. 1860, p. 358; Sclat. P. Z. S. 1861, p. 365, 366, 1864, p. 188; Bernst. Nat. Tijdschr. Ned. Ind. xxvii. p. 295 (1864); Wall. P. Z. S. 1864, pp. 279, 280, 293; Schleg. Mus. P.-B. Psittaci, p. 143 (1864); id. Dierent. p. 81 (1864); Schleg. Mus. P.-B. Mag. N. H. (3) xv. p. 74 (1865); Finsch, Neu-Guin. p. 158 (1865); Schleg. Ned. Tijdschr. Dierk. iii. p. 319 (1866); Schlet. P. Z. S. 1867, p. 184; Garrod, P. Z. S. 1873, pp. 466, 634, 1874. pp. 587, 588, 591, 595; Schley. Mus. P.-B. Psittaci, Revue, p. 67

<sup>\*</sup> From Linné's quotations it is quite evident that his P. cristatus is the Psittacus albus cristatus, Aldr. (=Kakatocs à huppe blanche of Buffon); but iu the description Linné, by a lapsus calami, wrote crista plicatili flava instead of alba. For this reason I think that his name ought to be discarded.

(1874); Rosenb. Reist. naar Geelvinkb. p. 6 (1875); id. Zool. Gart. 1878, p. 347; id. Malay. Arch. p. 407 (1879); Schmidt, P. Z. S. 1880, p. 309.

Cacatua leucolophus, Less. Tr. d'Orn. p. 182 (1831).

Plyctolophus cristatus, Benn. Pr. Zool. Soc. 1834, p. 41; Bp. Consp. i. p. 7 (1850); id. Compt. Rend. xxx. p. 138 (1850); Rosenb. Journ. f. Orn. 1862, p. 62; id. Nat. Fijdschr. Ned. Ind. xxv. pp. 141, 142 (1863); Nitzsch, Pterylogr. (Engl. ed.) p. 102 (1867).

Kakadoe cristatus, Bourj. Perr. pl. 82 (1837–38).

Psittacus albo-cristatus, Bourj. Perr., Ind. Gen. p. xlvii (1837–38).

Psittacus orientalis, Temm. (nec Lath.) Tabl. Meth. p. 56 (1839).

Plyctolophus leucolophus, Bp. Campt. Rend. xxx. p. 138 (1850).
Cacatua albocristata, Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xxi (1863).

Cacatua sp., Selat. P. Z. S. 1864, p. 160.

Cacatua cristatella, Wall. P. Z. S. 1864, pp. 279, 280, 293 (var. minor) (type examined); G. R. Gr. Hand-list, ii. p. 169, n. 8394 (1870).

Plictolophus leucolophus, Finsch, Papag. i. p. 283 (1867); Rehnw.

Vogelbild. t. iv. f. 3 (1878-83).

Cacatua alba, G. R. Gr. Hand-list, ii. p. 169, n. 8386 (1870); Salvad. Orn. Pap. e Mol. i. p. 99 (1880); Pleske, Bull. Ac. St. Pétersb. xxix. p. 523 (1884); Guillem. P. Z. S. 1885, p. 562 (Batchian, Bisa Isl., Obi Group); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. 155 (1889); Tristr. Cat. Coll. B. p. 72 (1889).

Plissolophus albus, Rehnw. Journ. f. Orn. 1881, p. 27 (Consp. Psitt.

p. 27).

Adult. White; also the crest is entirely white; base of the inner web of the quills and tail-feathers sulphur-yellow; naked skin round the eyes bluish white: iris red or dark olive; bill and feet black. Total length 18 inches, wing 12·4, tail 7·4, bill 1·8, tarsus 1·1.

Hab. The Halmahera group: Halmahera, Ternate, Tidore, Batchian, Obi Islands.

Specimens from Kau, on the northern peninsula of Halmahera, are generally much smaller and have been specifically separated as *C. cristatella*, Wall.; but the difference does not seem constant, and besides through all the region inhabited by *C. alba* larger and smaller specimens are to be found.

a. Ad. st.	Moluccas.	Zoological Society.
b. Ad. st.	Moluccas.	Purchased.
c. Ad. st.	Halmahera.	A. R. Wallace Coll.
$d$ . $\beta$ ad. sk.	Ternate.	A. R. Wallace Coll.
e. ♀ad. sk.	Ternate $(A, B, Meyer)$ .	Tweeddale Coll.
f. $Q$ ad. sk.	Batchian (A. R. Wallace).	Gould Coll.
g. Ad. sk.	Batchian.	Dr. A. B. Meyer [C.].
h. Ad. sk.	Kau, N. Halmahera.	A. R. Wallace Coll.
	(Type of	Cacatua cristatella, Wall.)

i. Skeleton.

# 8. Cacatua ophthalmica.

Cacatua ducorpsii, Sclat. (nec Hombr.) P. Z. S. 1862, p. 141, pl. xiv. Cacatua ophthalmica, Sclat. P. Z. S. 1864, pp. 188, 189; Wall.

P. Z. S. 1834, pp. 280, 293; Sclat. Ann. & Mag. N. H. (3) xv. p. 74 (1805); id. P. Z. S. 1867, p. 184; G. R. Gr. Hand-list, ii. p. 169, n. 8392 (1870); id. Ann. & May. N. H. (4) v. p. 329 11. p. 163, h. 8332 (1870); a. Ana. 3 May. B. H. (4) V. p. 326 (1870); Sclat. P. Z. S. 1877, p. 107; Salvad. Ann. Mus. Civ. Gen. x. p. 25, n. 5 (1877); id. Orn. Pap. e Mol. i. p. 103 (1880); Sclat. P. Z. S. 1880, p. 67 (New Britain); Layard, Ibis, 1880, p. 300; Finsch, Ibis, 1881, pp. 537, 538; Salvad. Orn. Pap. e Mol. iii. p. 513 (1882); Sclat. List Vert. An. 8th ed. p. 308 (1883); Shavpe, Gould's B. New Guin, pt. xx. pl. 3 (1885); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 155 (1889); Tristr. Cat. Coll. B. p. 72 (1889).

Cacatua triton, part., Schleg. Ned. Tijdschr. Dierk. iii. p. 320

(1866).

Plictolophus ophthalmicus, Finsch, Papag. i. p. 282 (1867); id.

P. Z. S. 1879, p. 17.

Plissolophus ophthalmicus, Rehnw. Journ. f. Orn. 1881, p. 27 (Consp. Psitt. p. 27); id. Vogelbild. t. xxxii. f. 5 (1878–83).

Adult. White; long inner feathers of the crest yellow; base of the inner web of the quills and tail-feathers tinged with sulphuryellow; naked skin round the eyes blue: bill black; feet dark grey; iris dark brown. Total length 19 inches, wing 12, tail 7, bill 1.6, tarsus 1.1.

Hab. New Britain.

No locality. a. Ad. sk.

b. Ad. sk. No exact locality (Rev. G. Brown). c. ♀ ad. sk.

d. Ad. sk. New Britain.

Zoological Society. (Type of the species.) Tweeddale Coll. Zoological Society.

Rev. G. Brown [C.].

#### 9. Cacatua moluccensis.

Greater Cockatoo, Edw. Birds, iv. pl. 160 (1751).

Cacatua rubrocristata, Briss. Orn. iv. p. 209, n. 10 (1760).

Kakatoës à huppe rouge, D'Aubent. Pl. Enl. 498; Buff. Hist. Nat. Ois. p. 95 (1779).

Great Red-crested Cockatoo, Lath. Syn. i. p. 257, n. 62 (1781); id.

Gen. Hist. ii. p. 204 (1822).

Psittacus moluccensis, Gm. S. N. i. p. 331, n. 96 (1788); Bechst. Kurze Uebers. p. 88 (1811); Kuhl, Consp. Psitt. pp. 12, 87 (1820); Hahn, Orn. Atlas, Papag. t. 70 (1837); S. Müll. Verh. Land- en Volkenk. p. 107 (1839-44); Thienem. Fortpfl. d. ges. Vög. p. 70, tab. xiv. f. 14 (1846).

Psittacus rosaceus, Lath. Ind. Orn. i. p. 103 (1790); Temm. Tabl.

Méth. p. 57 (1839).

Psittacus cristatus, Shaw (nec Linn.), Gen. Zool. viii. p. 478, pl. 72 (1811).

Cacatua rosacea, Vieill. N. D. xvii. p. 11 (1817); id. Enc. Méth. p. 1413 (1823); Fraser, P. Z. S. 1865, p. 227.

Psittacus malaccensis, Voigt, Cuv. Uebers. p. 737 (1831).

Cacatua erythrolophus, *Less. Tr. d'Orn.* p. 183 (1831); *Thienem. Fortpflz. d. ges. Vög.* p. 79, t. xiv. f. 14 (egg) (1852).

Cacatua erythrolophus, *Less. Tr. d'Orn.* p. 183 (1831); *Thienem. Fortpflz. d. ges. Vög.* p. 79, t. xiv. f. 14 (egg) (1852).

Cacatua erythrolophus, *Veg. Less. Vog.* p. 693 (1832); *Hartl. Syst. Veg. Ges. Mag.* p. 88 (1841).

Verz. Ges. Mus. p. 88 (1844); G. R. Gr. Gen. B. ii. p. 425, n. 4 (1845); Blyth, Cat. B. Mus. A. S. B. p. 1 (1849); Bp. Naumannia, 1856, Consp. Psitt. n. 208; id. Compt. Rend. xliv. p. 537

(1857); G. R. Gr. List Psitt. Brit. Mus. p. 93 (1859); Sclat. P. Z. S. 1859, p. 436, 1860, p. 226; G. R. Gr. P. Z. S. 1860, p. 358; Wall. Ibis, 1861, p. 284; Sclat. P. Z. S. 1864, p. 188; Wall. P. Z. S. 1864, pp. 279, 293; Schleg. Mus. P.-B. Psittaci, p. 142 (1864); Finsch, Neu-Guin. p. 158 (1865); Schat. Ann. S. Mug. N. H. (3) xv. p. 74 (1865); Schleg. N. d. Tijdschr. Dierk. iii. p. 319 (1866); G. R. Gr. Hand-list, ii. p. 169, n. 8385 (1870); Garrod, P. Z. S. 1876, p. 419; Salvad. Ann. Mus. Civ. Gen. x. p. 24, n. 3 (1877); Rosenb. Zool. Gart. 1878, p. 347; id. Malay. Archip. p. 323 (1879); Salvad. Orn. Pap. e Mol. i. p. 101 (1880); Schmidt, P. Z. S. 1880, p. 309; Blas. P. Z. S. 1882, p. 701; Sclat. List Vert. An. 8th ed. p. 388 (1883); Sulvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 155 (1889); Tristr. Cat. Coll. B. p. 72 (1889). Plyctolophus rosaceus, Lear, Parr. pl. 2 (1832).

Plyctolophus moluccensis, Selby, Nat. Libr., Parrots, p. 131 (1836);

Ep. Compt. Rend. xxx. p. 138 (1850); Rosenb. Journ. f. Orn. 1862, pp. 61, 62; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 140, 141 (1863).

Kakadoe rubrocristatus, Bourj. Perr. pl. 78 (1837–38).

Cacatua rubrocristatus, Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 255.

Cacatua malaccensis, Souancé, Rev. et Mag. de Zool. 1856, p. 225.

Cacatua rubrocristata, Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xxi (1863); Schley. Dierent. p. 81 (1864).

Plictolophus moluccensis, Finsch, Papag. i. p. 280 (1867); Lenz, Journ. f. Orn. 1877, p. 360; Rehnw. Vogelbild. t. iv. f. 4 (1878–83).

Plictolophus rosaceus, Gulliver, P. Z. S. 1875, p. 490. Plissolophus moluccensis, Rchnw. Journ. f. Orn. 1881, p. 27 (Consp.

Psitt. p. 27).

Adult. Rosy white; the inner long feathers of the crest edged with orange-vermilion; inner web of the quills and tail-feathers tinged with buff-yellow; naked skin round the eyes bluish grey: iris dark brown; bill black; feet dark grey. Total length 20 inches, wing 12, bill 1.8, tarsus 11.

Hab. Ceram and Amboyna.

Moluccas. P. G. Gill, Esq. [P.]. a. Ad. st. Purchased. b. Ad. sk. Moluccas. No locality. c. Ad. sk. Gould Coll. E. Ceram. d. o ad. sk. Wallace Coll. e. Skeleton. Moluccas. f. Skeleton. Zoological Society.

## 10. Cacatua gymnopis.

Cacatua sanguinea, Sturt (nec Gould), Trav. in Centr. Austr. ii. App. p. 36 (1849); Ramsay, Pr. Linn. Soc. N. S. W. i. p. 383

g. Skeleton.

Cacatua gymnopis, Selat. P. Z. S. 1871, pp. 490, 493 (cum fig. capitis), 1875, pp. 59, 61; id. List Vert. An. 8th ed. p. 313 (1883); Sharpe in Gould's B. New Guin. pt. xix. pl. 1 (1885); Sclat. P. Z. S. 1886, p. 320; Ramsay, Tab. List, p. 15, n. 470 (1888); id. Cat. Austr. B., Psittaci, p. 6 (1891). Plictolophus gymnopis, Giebel, Thes. Orn. iii. p. 229 (1877); Ramsay,

Pr. Linn. Soc. N. S. W. ii. p. 192 (1877).

Plissolophus gymnopis, Rehnw. Journ. f. Orn. 1881, p. 25 (Consp. Psitt. p. 25); id. Vogelbild. t. xxxii. f. 4 (1878-83).

White; forehead and lores stained with red; the feathers of the head, hind neck, and abdomen stained with rosy at the base; the quills and the inner web of the tail-feathers pale yellow; periophthalmic region naked and largely extended into a bare blue open space below: bill whitish; feet bluish; irides dark brown. Total length 16 inches, wing 11, tail 5, bill 1.26, tarsus 0.9.

Hab. South Australia (and also Northern and N.W. Australia?).

Salvin-Godman Coll. a. Ad. sk. Australia. S. Australia. Capt. Sturt. b. Ad. st. c, d. Ad. sk. S. Australia. Capt. Sturt.

### 11. Cacatua sanguinea.

Cacatua sanguinea, Gould, P. Z. S. 1842, p. 138 (N. coast of Australia); id. B. Austr. v. pl. 3 (part x., 1843); G. R. Gr. Gen. B. iii. p. 425, n. 9 (1845); Rehnb. Newentd. Vög. N. Holl. no. 190 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 257; id. Naumannia, 1856, Consp. Psitt. n. 271; Elsey, P. Z. S. 1857, p. 26; Zuchold, Journ. f. Orn. 1858, p. 39; G. R. Gr. List Psitt. Brit. Mus. p. 95 (1859); id. Cat. B. New Guin. p. 60 (1859); Schleg. Mus. p. 35 (1859); id. Cat. B. New Guil. p. 60 (1859); Schleg. Jaarb. Nat. Art. Magistra, p. 182 (1861); id. Journ. f. Orn. 1861, p. 379; Schlat. P. Z. S. 1862, p. 323; id. Dierent. p. 81 (1864); Schlat. P. Z. S. 1864, p. 188; Gould, Handb. B. Austr. ii. p. 6 (1865); Schleg. Ned. Tijdschr. Dierk. iii. p. 319 (1866); Diggl. Orn. of Austr. ii. pl. 72; Schlat. P. Z. S. 1867, p. 184, 1871, p. 492 (cum fig. capitis), 1875, pp. 59, 60, 61 (cum fig. pedis); Ramsay, Pr. Linn. Soc. N. S. W. i. p. 58 (1875); Schlat. List Levt. An. 8th ed. p. 311 (1883); Ramsay, Tah. List. p. 15 Vert. An. 8th ed. p. 311-(1883); Ramsay, Tab. List, p. 15, n. 469 (1888); id. Cat. Austr. B., Psittaci, p. 4 (1891).
Plyctolophus sanguineus, Bp. Compt. Rend. xxx. p. 139 (1850).

Eolophus sanguineus, Ep. Compt. Rend. xliv. p. 537 (1857).

Lophochroa sanguinea, Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xxii (1863); G. R. Gr. Hand-list, ii. p. 170, n. 8400 (1870). Phetolophus sanguineus, Finsch, Papag. i. p. 307 (1867), ii. p. 942 (1868); Gieb. Thes. Orn. iii. p. 230 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 192 (1877).

Plictolophus rhodolorus, Finsch, l. c. (note) (1867).

Plissolophus sanguineus, Rchnw. Journ. f. Orn. 1881, p. 25 (Consp. Psitt. p. 25); id. Vogelbild. t. xxxii. f. 3 (1878–83).

White; base of the lores and sides of the face stained with patches of blood-red; base of the inner webs of the primaries, secondaries, and tail-feathers fine sulphur-yellow; naked skin round the eyes white, and with no broad naked plaque below them: iris dark brown; bill yellowish white; feet mealy brown. length 14 inches, wing 10, tail 5, bill 1.2, tarsus 0.95.

Hab. Australia: N. Coast, New South Wales, Interior.

This species is easily distinguished from the preceding one by the shape and colour of the naked skin round the eyes.

Northern Australia, Dec. 14. Gould Coll. a. Q ad. sk. (Type of species.) b. Ad. sk. Port Essington. Capt. Chambers [P.].

### 12. Cacatua goffini.

Lophochroa goffini, Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xxiii (1863).

Cacatua goffini, Schleg. Dierent. p. 82 (1864); Sclat. P. Z. S. 1875, p. 60; Tristr. Ibis, 1882, p. 143 (?); Büttik. Not. Leyd. Mus. viii. p. 59 (1885); ? Pelz. & Lor. Ann. d. naturh. Hofmus. 1888, p. 40; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 155 (1889);

Rams. Cat. Austr. B., Psittaci, p. 5 (note) (1891). Cacatua sanguinea, Schleg. (nec Gould) Mus. P.-B. Psittaci, p. 144 (1864); id. op. cit. Revue, p. 67 (1874); Sclat. P. Z. S. 1883, pp. 194, 197, 200 (Larat, Timor-laut); Forbes, P. Z. S. 1884, p. 431; Meyer, Zeitschr. f. ges. Orn. 1884, p. 194; Forbes, P. Z. S. 1884, p. 194; Forbes, P. Z. S. 1884, p. 194; Forbes, P. Z. S. 1884, p. 196; First Cat. Coll. B. p. 72 (1889).

Plictolophus goffini, Finsch, Papag. i. p. 308 (1867).

Liemetis (?) goffini, G. R. Gr. Hand-list, ii. p. 170, n. 8404 (1870). ? Cacatua ducorpsii, Sclat. (nec H. et J.) P. Z. S. 1871, pp. 491, 492, f. 2 (head).

Plissolophus goffini, Rehnw. Journ. f. Orn. 1881, p. 26 (Consp. Psitt. p. 26); id. Vogelbild. in the text of pl. xxxii. (1878-83).

Adult. Very much like C. sanquinea, Gould, but smaller; the naked skin round the eyes "white tinted with blue, iris light red; bill pale blue; legs and feet dirty blue" (Forbes). Total length 12.5 inches, wing 9, tail 4.10, bill 1.25, tarsus 0.81.

Female. A little smaller than the male.

Hab. Tenimber Islands.

The species from Tenimber Islands has been identified with C. goffini (Finsch) by Büttikofer of the Levden Museum, where the type of the species is preserved.

a. ∂ ad. sk.	Timor-laut, Aug. 6, 1882	Tweeddale Coll.
	(H. O. Forbes).	
$b, c. \ \mathcal{J} \ \mathcal{Q} \ \text{ad. sk.}$	Timor-laut, Aug. 6, 1882.	H. O. Forbes [C.].
d. ♀ ad. sk.	Larat, Timor-laut, Sept.	H. O. Forbes [C.].

# 13. Cacatua ducorpsi.

Cacatoës de Ducorps, Homb. & Jacq. Voy. Pôle Sud, Atlas, pl. 26. f. 1 (1845).

Plyctolophus du crops (!), Bp. Compt. Rend. xxx. p. 138 (1850);

id. Rev. et Mag. de Zool. 1854, p. 156, n. 262.
Cacatua ducorpsii, Jacq. & Pucher. Voy. Pôle Sud, Zool. i. p. 108, sp. 73 (1853) (types examined); Hartl. Journ. f. Orn. 1854, p. 165; Sclat. P. Z.S. 1860, p. 228, 1864, pp. 159, 187, 188, 189, pl. xvii. (nec P. Z. S. 1862, pl. xiv.); Wall. P. Z. S. 1864, pp. 280, 293; Sclat. Ann. & May. N. H. (3) xv. p. 74 (1865); id. P. Z. S. 1867, p. 184, 1869, pp. 118, 124, 1875, pp. 59, 60; Salvad. Ann. Mus. Civ. Gen. x. p. 25, n. 6 (1877); Ramsay, Pr. Linn. Soc. N. S. W. iv. p. 68 (1879); id. Nature, xx. p. 125 (1879); Sulvad. Orn. Pap. e Mol. i. p. 104 (1880); Layard, Ibis, 1880, p. 307; Rams. Pr. Linn. Soc. N. S. W. vii. p. 33 (1882) (Savo); Tristr. Ibis, 1882, p. 143; Sharpe, Gould's B. New Guin. pt. xix. pl. 2 (1885); Grant, P. Z. S. 1887, p. 329, 1888, p. 188; Woodford, P. Z. S. 1888, p. 249; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 155 (1889); Tristr. Cat. Coll. B. p. 72 (1889); Salvad. Agginite, p. 215 (1891).

Cacatua ducrops, Bp. Naumannia, 1856, Consp. Psitt. n. 269. VOL. XX.

entur.

Ducorpsius typus, Bp. Compt. Rend. xliv. p. 537 (1857).

Cacatua ducropsii, G. R. Gr. List Psitt. Brit. Mus. p. 94 (1859); id. Cat. B. Trop. Isl. p. 34 (1859).

Lophochroa learii, Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xxiii (1863).

Cacatua sanguinea, part., Schleg. Mus. P.-B. Psittaci, p. 144 (1864). Cacatua triton, part., Schleg. Ned. Tijdschr. Dierk. iii. p. 320 (1866). Plictolophus ducropsii, Finsch, Papag. i. p. 311 (1867); id. P. Z. S.

1869, p. 127. Cacatua goffini, Sclat. (nec Finsch), P. Z. S. 1869, pp. 122, 124, 1875,

pp. 60, 61, pl. x.; Garrod, P. Z. S. 1877, p. 793.

Ducorpsius ducorpsii, G. R. Gr. Hand-list, ii. p. 170, n. 8398 (1870). Plissolophus ducorpsi, Rehnw. Journ. f. Orn. 1881, p. 26 (Consp. Psitt. p. 26); id. Vogelbild. in the text of pl. xxxii. (1878-83).

Adult. Very much like C. sanquinea, but distinguishable by the entire absence of any red markings on the face, which is entirely white; the basal part of the crest-feathers is reddish orange, with a slight tinge of lemon-yellow; the naked skin round the eyes is nearly circular in form, and, in the living bird, of a pale blue colour: "iris brown; bill and feet grey" (Woodford). Total length 13 inches, wing 10, tail 4.5, bill 11.5, tarsus 0.75.

Hab. Solomon Islands.

C. M. Woodford [C.]. Alu. a. of ad. sk. b. ♀ ad.sk. Rubiana. C. M. Woodford [C.] c. Ad. sk. Solomon Islands (?). Salvin-Godman Coll. d. Skeleton. (Specimen figured P. Z. S. 1875, pl. x., as C. goffini from Queensland.)

e, f. Skulls. Solomon Islands. C. M. Woodford [C.]. C. M. Woodford [C.].

g, h. Skulls and sterna.

# 14. Cacatua hæmaturopygia.

Cacatua minor, Briss. Orn. iv. p. 212, n. 11, tab. xxii. f. 1 (1760); Gerini, Orn. i. p. 96, t. 119; Schleg. Dierent. p. 81 (1864). Petit Kakatoës des Philippines, D'Aubent. Pl. Enl. 191.

Psittacus hamaturopygius, L. S. Müll. S. N. Suppl. p. 77, no. 51 (1776) (ex Pl. Enl. 191); Cass. Proc. Ac. Nat. Sc. Philad. 1864, p. 239, n. 51.

Red-vented Cockatoo, Brown, Ill. p. 10, t. 5 (1776); Lath. Syn. i. p. 258 (1781); id. Gen. Hist. ii. p. 204 (1822).

Le petit Kakatoës à bec couleur de chair, Buffon, Hist. Nat. Ois.

vi. p. 96 (1779).

Psittacus philippinarum, Gm. S. N. i. p. 331, n. 95 (1788) (ex-Brisson); Lath. Ind. Orn. i. p. 108, n. 79 (1790); Bechst. Kurze Uebers. p. 88 (1811); Shaw, Gen. Zool. viii. p. 481 (1811); Kuhl, Consp. Psitt. p. 86 (1820); Desm. Dict. Sc. Nat. xxxix. p. 114 (1826); Voigt, Cuv. Uebers. p. 737 (1831); Temm. Tabl. Méth. p. 56 (1839).

Cacatua philippinarum, Vieill. N. D. xvii. p. 10 (1817); id. Euc. Méth. iii. p. 1413, pl. 227. f. 1 (1823); Wagl. Mon. Psitt. p. 692 (1832); Hartl. Syst. Verz. Ges. Mus. p. 88 (1844); G. R. Gr. Gen. B. ii. p. 425, n. 2 (1845); Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 256; id. Naumanniu, 1856, Consp. Psitt. n. 270; Cass. Un. St. Expl. Exp. p. 233 (1858); G. R. Gr. List Psitt. Brit. Mus. p. 92 (1859); Sclat. P. Z. S. 1800, p. 225 (note); Schleg.

Jaarb. Nat. Art. Magistra, 1861, p. 183; id. Journ. f. Orn. 1861, p. 378; Solat. P. Z. S. 1861, p. 234, 1864, p. 188; Wall. P. Z. S. 1864, pp. 279, 293; Schleg. Mus. P.-B. Psittaci, p. 144 (1864); id. Ned. Tijdschr. Dierk. iii. p. 319 (1866); Mayt. Journ. f. Orn. 1866, p. 21; Sclat. P. Z. S. 1867, p. 184; Wald. § Layard, Ibis, 1872, p. 96; Schleg. Mus. P.-B. Psittaci, Revue, p. 67 (1874); Garrod, P. Z. S. 1876, p. 692, 1877, p. 793; Tweedd. Orn. Works, p. 116 (1881); Sclat. List Vert. An. 8th ed. p. 311 (1883); id. P. Z. S. 1884, p. 251; Tristr. Cat. Coll. B. p. 72 (1889).

Plyctolophus philippinarum, Steph. Gen. Zool. xiv. p. 108 (1826);

Selby, Nat. Libr., Parrots, p. 131 (1836).

Kakadoe philippinarum, Bourjot, Perr. pl. 81 (1837–38).

Eolophus philippinarum, Souancé, Rev. et Mag. de Zool. 1856, p. 224; Bp. Compt. Rend. xliv. p. 537 (1857).

Lophochroa minor, Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xxiii

(1863).

Plictolophus philippinarum, Finsch, Papag. i. p. 310 (1861); Gulliver,

P. Z. S. 1875, p. 490; Giebel, Thes. Orn. iii. p. 230 (1877). Cacatua hæmaturopygia, G. R. Gr. Hand-list, ii. p. 169, n. 8384 (1870); Wald. & Layard, Ibis, 1872, p. 96; Wald. Tr. Zool. Soc. ix. pp. 132, 250 (1875); Sharpe, Tr. Linn. Soc. (2) Zool. i. p. 312 (1876); Tweedd. P. Z. S. 1877, pp. 755, 756, 817, 1878, pp. 107, 281, 340, 379, 937; Sharpe, P. Z. S. 1879, p. 313 (Sooloo Isl.); Tweedd. Orn. Works, pp. 116, 299, 410, 529, 530, 544, 566, 587, 595, 602, 628 (1881); Wardl. Rams. Tweedd. Orn. Works, p. 655, n. 1 (1881); Salvin, Cat. Strickl. Coll. p. 453, n. 2216 (1882); Kutter, Journ. f. Orn. 1882, p. 176, 1883, p. 293; Sharpe, Ibis, 1884, p. 316; Guillem. P. Z. S. 1885, pp. 250, 251; Sharpe, Ibis, 1888, p. 192; Blas. Ornis, iv. p. 305 (1888); Everett, Journ. St. Br. R. As. Soc. 1889, p. 176; Whiteh. Ibis, 1890, p. 41 (Palawan); Steere, List, p. 5 (1890).

Camptolophus philippinarum, Sundev. Meth. nat. Av. disp. Tent.

p. 69 (1872).

Plissolophus philippinarum, Rehnw. Journ. f. Orn. 1881, p. 25 (Consp. Psitt. p. 25); id. Vogelbild. Taf. xxxii. f. 2 (1878–83).

Adult. White; under tail-coverts pale vermilion, edged with white; ear-coverts washed with rose-colour; inside of the crest tinged with brimstone-yellow, and in some specimens with very pale vermilion; wings and tail underneath brimstone-yellow, brighter on the tail; bill lead-colour, with the tip yellowish; naked skin round the eyes white: iris dull carmine; feet dark lead-grey. Total length 14 inches, wing 8.5, tail 4.6, bill 0.95, tarsus 0.85.

Hab. Philippine and Sulu Islands.

Everett).

Specimens from different islands show some little differences in the dimensions.

a. Ad. st. Philippine Isl. Zoological Society. Gould Coll. b. Ad. sk. Manila. Cataguan. c. Ad. sk.  $H. Cuming, Esq. \lceil C. \rceil$ . Luzon, Jan. (A. B. Meyer). d. 3 ad. sk. Tweeddale Coll.  $e, f, \beta \supseteq ad. sk.$ Cebu, March, April (A. H. Tweeddale Coll. Everett). Amparo, S. Leyte, July (A. H.  $g, h. \not \subset \Omega$  ad. sk. Tweeddale Coll.

к 2

 $i, k, \beta \subsetneq ad. sk.$ Valencia, Negros, Aug. (A. H. Tweeddale Coll. Everett),March (A. B.Tweeddale Coll. l. ♀ ad. sk. Guimaras, Meyer). Nipah Is., July (A. II. Everett). Tweeddale Coll. m. Q ad. sk. Tweeddale Coll. Butuan, May (A. H. Everett). n, o. o ad. sk. Surigao, May (A. H. Everett). Tweeddale Coll. p. Q ad. sk. Sulu Islands (Burbidge). H. Veitch, Esq. [P.]. q, r. Ad. sk.

### 15. Cacatua roseicapilla.

Cacatua roseicapilla, Vieill. N. D. xvii. p. 12 (1817); Wagl. Mon. Psitt. p. 691 (1832); G. R. Gr. Gen. B. iii. p. 425, n. 1 (1845); id. List Psitt. Brit. Mus. p. 95 (1859); Schleg. Jaarb. Nat. Artis Magistra, 1861, p. 183; id. Journ. f. Orn. 1861, p. 379; Selat. P. Z. S. 1862, pp. 140, 184, 1864, p. 188; Schleg. Mus. P.-B. Psittaci, p. 145 (1864); Gould, Hundb. B. Austr. ii. p. 8 (1865); Schleg. Ned. Tijdschr. Dierk. iii. p. 319 (1866); Garrod, P. Z. S. 1873, p. 634; Masters, Pr. Linn. Soc. N. S. W. ii. p. 278 (1877); Sclat. List Vert. An. 8th ed. p. 313 (1883); Salvin, Cat. Strickl. Coll. p. 453 (1888); Ramsay, Tab. List, p. 16, n. 471 (1888); Tristr. Cat. Coll. B. p. 72 (1889); Cox & Ham. Pr. Linn. Soc. N. S. W. (2) iv. p. 416 (1889); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 251 (1889); Rams. Cat. Austr. B., Psittaci, p. 7 (1891).

Psittacus eos, Kuhl, Consp. Psitt. pp. 11, 88 (1820); Temm. Pl. Col. 81 (1823); Desm. Dict. Hist. Nat. xxxix. p. 117 (1826);

Temm. Tabl. Méth. p. 56 (1839).

Cacatua rosea, Vicill. Gal. des Ois. i. 2° part. p. 5, pl. 25 (1820–23); id. Enc. Méth. iii. p. 1415 (1823); Voigt, Cuv. Uebers. p. 738 (1831); Less. Tr. d'Orn. p. 183 (1831); Bolle, Journ. f. Orn. 1856, p. 170; Pelz. Verh. z.-b. Gesellsch. Wien, 1865, p. 944.

Rose-coloured Cockatoo, Lath. Gen. Hist. ii. p. 207 (1822). Plyctolophus eos, Vig. & Horsf. Trans. Linn. Soc. xv. p. 269 (1826).

Cacatua eos, Less. Man. d'Orn. ii. p. 143 (1828); id. Compl. de Buff. ix. p. 197, pl. — f. 2 (1837), 2nd ed. p. 62 (1838); Gould, B. Austr. v. pl. 4 (pt. xx., 1845); Rehub. Neuentd. Vög. N. H. no. 456 (1850); Elsey, P. Z. S. 1857, p. 26; Zuchold, Journ. f. Orn. 1858, p. 39; Diygl. Orn. Austr. ii. pl. 73 (1876).

The Rose Cockatoo, Sturt, Trav. in Austr. ii. pl. on p. 24 (1834). Plyctolophus roseicapillus, Selby, Nat. Libr., Parrots, p. 131 (1836);

Finsch, Ibis, 1882, p. 393.

Kakadoe rosea, Bourf. Perr. pl. 74 (1837–38). Eolophus roseus, Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 253; Hartl. Journ. f. Orn. 1854, B. p. lxiii; Bp. Naumannia, 1856, Consp. Psitt. n. 266; Souancé, Rev. et Mag. de Zool. 1856, p. 224.

Eolophus roseicapilla, Bp. Compt. Rend. xliv. p. 537 (1857);
G. R. Gr. Hand-list, ii. p. 120, n. 8401 (1870); Broadb. Pr. R. Soc. Queensl. iii. p. 30 (1886).
Eolophus roseicapillus, Finsch, Ned. Tijdschr. Dierk. i. Berigten,

p. xxiii (1863); Sundev. Meth. nat. Av. disp. Tent. p. 69 (1872).

Plictolophus roseicapillus, Finsch, Papag. i. p. 313 (1867); Gulliver, P. Z. S. 1875, p. 490; Gieb. Thes. Orn. iii. p. 230 (1877); Rehnw. Vogelbild, t. xii, f. 3 (1878-83).

Plictolophus roseicapilla, Ramsay, Pr. Linn. Soc. N. S. W. ii.

p. 192, n. 450 (1877–78).

Plissolophus roseicapillus, Rchnw. Journ. f. Orn. 1881, p. 26 (Consp. *Psitt.* p. 26).

Adult. Crown of the head pale rosy white; upper surface grey, deepening into brown at the extremity of the quills, and becoming nearly white on the rump and upper tail-coverts; neck, all the under surface from below the eyes and smaller under wing-coverts, rich deep rosy red; under tail-coverts grey; tail grey, darker below: irides rich deep rosy red; orbits brick-red; bill white; feet nearly dark brown. Total length 14 inches, wing 10·4-9·7, tail 5·2, bill 1.05, tarsus 0.85.

Hab. Australia.

n. ? Skeleton.

Gould states that the birds from New South Wales differ from those of the North Coast, being larger, and having the bare skin round the eyes more extended, and the rosy colour of the breast and the grey colouring of the back darker.

a. Ad. sk. b. Ad. st. c. Ad. sk. d, e. Ad. sk. f, g. Ad. sk. h-k. Ad. sk. l. Ad. sk. m. Ad. sk.	Australia. Interior of S. Australia. S. Australia. N.W. Australia. N.W. Australia. Australia.	Australian Mus. [P.]. Capt. Sturt [P.]. Capt. Sturt [P.]. Gregory's Exped. J. R. Elsey, Esq. [P.]. Salvin-Godman Coll. Gould Coll.
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#### 5. LICMETIS.

Type.

Licmetis, Wagl. Mon. Psitt. p. 505 (1832) . . . . L. nasica.

Range. Confined to Australia.

Australia.

# Key to the Species.

a. Smaller; naked skin round the eyes smaller, light nasica, p. 133. b. Larger; naked skin round the eyes broader and darker, of a blue-lead colour ..... pastinator, p. 134.

#### 1. Licmetis nasica.

Psittacus nasicus, Temm. Trans. Linn. Soc. xiii. p. 115 (1819); id. Pl. Col. 331 (livr. 56, 1825); Voigt, Cuv. Uebers. p. 738 (1831); Temm. Tabl. Méth. p. 56 (1839).

1 ... Kin

Psittacus tenuirostris, Knhl, Consp. Psitt. pp. 12, 88 (1820); Thienem, Fortpflanz. d. ges. Vög. p. 79 (1846).

Long-nosed Cockatoo, Lath. Gen. Hist. ii. p. 205 (1822).

Plyctolophus tenuirostris, Steph. Gen. Zool. xiv. p. 108 (1826).

Cacatua nasicus, Less. Man. d'Orn. ii. p. 143 (1828). Cacatua nasica, Less. Tr. d'Orn. p. 183 (1831); Schley. Mus. P.-B.

Psittaci, p. 146 (1864); id. Mus. P.-B. Psittaci, Revue, p. 67 (1874).

Liemetis tenuirostris, Wagl. Mon. Psitt. pp. 505, 695 (1832); Sw. Class. B. ii. p. 302 (1837); G. R. Gr. Gen. B. ii. p. 425, n. 1 (1845); Bp. Consp. i. p. 7 (1850); id. Rev. et Mag. de Zool. 1854, p. 156, n. 267; id. Naumannia, 1856, Consp. Psitt. n. 280; Souance, Rev. et Mag. de Zool. 1856, p. 225; Bolle, Journ. f. Orn. 1856, p. 170; G. R. Gr. List Psitt. Brit. Mus. p. 96 (1859); Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xxiii (1863); Gould, Handb. B. Austr. ii. p. 11 (1865); G. R. Gr. Hand-list, ii. p. 170, n. 8402 (1870); Sclat. List Vert. An. 8th ed. p. 314 (1883).

Cacatua nasutus, Less. Compl. de Buff., Ois. 2nd ed. p. 602 (1838). Kakadoe tenuirostris, Bourj. Perr. pl. 76 (1837–38).

Licmetis nasicus, Gould, B. Austr. v. pl. v. (part xxvii., 1847);

Blyth, Cat. B. Mus. A. S. B. p. 2 (1849); Rehnw. Journ. f. Orn. 1881, p. 23 (Consp. Psitt. p. 23); Ramsay, Tab. List, p. 16 (1888); id. Cat. Austr. B., Psittaci, p. 9 (1891). Cacatua tenuirostris, Schleg. Dierent. p. 82 (1864).

Plictolophus nasica, Finsch, Papag. i. p. 316 (1867); Gieb. Thes.

Orn. iii. p. 230 (1877).

Licmetis nasica, Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193 (1877); Rehnw. Vogelbild. t. iv. f. 7 (1878-83); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 252 (1889).

Licmetus nasicus, Tristr. Cut. Coll. B. p. 72 (1889).

Adult. White; lores and a narrow frontal band red; the feathers of the head, neck, and breast are scarlet at the base, showing through the white, especially on the breast; the under surface of the wing washed with pale brimstone-yellow, the under surface of the tail also washed with brimstone-yellow, but brighter: iris light brown; bill white; naked skin round the eyes light blue; feet dull olive-grey. Total length 15 inches, wing 11, tail 5, bill 1.95, tarsus 0.95.

Hab. Australia, from the Gulf of Carpentaria, through the Interior

to N. S. Wales and South Australia,

a. Ad. sk. Australia.

b. ♀ ad.; c. Ad. Murray River, N. S. Wales. sk.

d. Ad. sk. Lake Victoria, N. S. Wales. Australia. *e-g.* Ad. sk. h. Skeleton.

Linnean Society. (Type of species.) Sir G. Grey [P.].

Capt. Sturt [P.]. Salvin-Godman Coll.

# 2. Licmetis pastinator.

Licentis pastinator, Gould, P. Z. S. 1840, p. 175 (Western Australia); G. R. Gr. Gen. B. ii. p. 425, n. 2 (1845); Bp. Consp. i. p. 7 (1850); id. Rev. et Mag. de Zool. 1854, p. 156, n. 268; id. Naumannia, 1856, Consp. Psitt. n. 281; Souancé, Rév. et Mag. de Zool. 1856, p. 225; G. R. Gr. List Psitt. Brit. Mus. p. 96 (1859); Gould, Handb. B. Austr. ii. p. 12 (1865); G. R. Gr. Hand-list, ii. p. 170, n. 8403 (1870); Rchnw. Vogelbild., in the text of pl. iv. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 23 (Consp. Psitt. p. 23); Sclat. List Vert. An. 8th ed. p. 314 (1883); Ramsay, Tab. List, p. 16 (1888); id. Cat. Austr. B., Psittaci, p. 10 (1891).

Psittacus piscinator, Thienem. Fortyflanz. d. ges. Vog. p. 79 (1846). Plictolophus pastinator, Finsch, Papag. i. p. 318 (1867); Gieb. Thes. Orn. iii. p. 230 (1877).

Liemetus pastinator, Tristr. Cat. Coll. B. p. 72 (1889).

Adult. Very much like L. nasica, only a little larger, the naked space round the eyes larger and darker, of a blue-lead colour.

Hab. Western Australia.

I have seen some living specimens in the Menagerie of the Zoological Society of London; they show most clearly those distinctive characters which, according to Gould, are not so apparent in dry skins.

# Subfamily II. CALOPSITTACINÆ.

#### 6. CALOPSITTACUS.

Type. Calopsitta, Less. Ill. de Zool. pl. 49 (1832) . . . . C. novæ hollandiæ. Leptolophus, Sw. Zool. Ill. pl. 112 (1832) . . . . . C. novæ hollandiæ. Callipsittacus, Ayass. Nomencl. Zool., Ind. Univers. pp. 59, 61 (1846).

Calopsittacus, Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 199 (1878).

Range. Australia, except the north-eastern part.

## 1. Calopsittacus novæ hollandiæ.

Crested Parrakeet, Lath. Gen. Syn. i. p. 250 (1781); id. Gen. Hist.

ii. p. 174 (1822).

Psittacus novæ hollandiæ, Gm. S. N. i. p. 328, n. 84 (nec p. 316) (1788); Lath. Ind. Orn. i. p. 102, n. 59 (1790); Bechst. Kurze Ueb. p. 79 (1811); Shaw, Gen. Zool. viii. p. 452 (1811); Vieill.
N. D. xxv. p. 350 (1817); Kuhl, Consp. Psitt. p. 100 (1820);
Vieill. Enc. Méth. iii. p. 1388 (1822); Thienem. Fortpflanz. d. ges.

Vög. p. 74 (1846).

Nymphicus novæ hollandiæ, Wagl. Mon. Psitt. pp. 490, 522 (1832); Selby, Nat. Libr., Parrots, p. 186, pl. 30 (1836); Gould, B. Austr. v. pl. 45 (1842); Hartl. Syst. Verz. Ges. Mus. p. 84 (1844); G. R. ph. 43 (1642); Marta. Syst. Ferz. Res. Mas. p. 64 (1644); G. M. Gr. Gen. B. ii. p. 406 (1846); Bp. Consp. i. p. 2 (1850); Relaib. Neuentd. Vöy. N. Holl. n. 186 (1850); Bp. Rev. et May. de Zool. 1854, p. 154, n. 195; Souancé, Rev. et May. de Zool. 1856, p. 213; Bp. Naumannia, 1856, Consp. Psitt. n. 199; Bolle, Journ. f. Orn. 1856, p. 170; Elsey, P. Z. S. 1857, p. 27; Zuchold, Journ. f. Orn. 1858, p. 20; However, Large, f. Org. 1859, p. 260; Repmett. 1858, p. 39; Homeyer, Journ. f. Orn. 1859, p. 360; Bennett, Gath. Natural. Austr. p. 168 (1860); Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xxi (1863); Muell. P. Z. S. 1869, p. 279; Russ, Journ. f. Orn. 1869, p. 80, 1870, p. 30; Gulliver, P. Z. S. 1875, p. 489; Diggl. Syn. B. Austr. pl. 82 (1877).

Calopsitta guy, Less. Ill. de Zool. pls. 49, 50 (mai, 1832).

Leptolophus auricomis, Sw. Zool. Ill. pl. 112 (1832); id. Class. B. ii. p. 305 (1837); Bowrj. Perr. pl. 11 (\$\pi\$), 11 bis (\$\pi\$) (1837-38).

Platycercus novæ hollandiæ, Vig. P. Z. S. 1833, p. 106; Schleg.

Mus. P.-B. Psittaci, p. 99 (1864); id. op. cit. Revue, p. 40 (1874).

Palæornis novæ hollandiæ, Lear, Parr. pl. 27 (1832).

Calopsitta novæ hollandiæ, Less. Compl. de Buff. ix. p. 198 (1837), 2nd ed. p. 603 (1838); G. R. Gr. List Gen. B. p. 85 (1855); Bolle, Journ. f. Orn. 1856, p. 170; G. R. Gr. List Psitt. Brit. Mus. p. 1 (1859); Sclat. P. Z. S. 1860, p. 242, 1862, pp. 140, 185, 323; Gould,

Handb. B. Austr. ii. p. 84 (1865); Ramsay, Ibis, 1866, p. 332; Sclat. P. Z. S. 1869, p. 627 (breeding); G. R. Gr. Hand-list, ii. p. 168, n. 8383 (1870); Garrod, P. Z. S. 1873, pp. 465, 634, 1874, p. 587, 1877, p. 297; Ramsay, P. Z. S. 1873, pp. 465, 634, 1874, p. 587, 1877, p. 297; Ramsay, P. Z. S. 1877, p. 351; Sclat. List Vert. An. 8th ed. p. 315 (1883); Goodchild, P. Z. S. 1886, p. 190; Sutton, P. Z. S. 1886, p. 211; Tristr. Cat. Coll. B. p. 73 (1889).

Cacatua nova hollandiæ, Schleg. Journ. f. Orn. 1861, p. 380. Callipsittacus nova hollandiæ, Finsch, Papag. i. p. 260 (1867); Sundev. Meth. nat. Av. disp. Tent. p. 69 (1872); Gieb. Thes. Orn. i. p. 536 (1872); Rehnw. Vogelbild. t. xiv. f. 5 (1878-83); id. Journ.
 f. Orn. 1881, p. 38 (Consp. Psitt. p. 38).
 Calopsittacus novæ hollandiæ, Ramsay, Pr. Linn. Soc. N. S. W. ii.

p. 193, n. 463 (1878); Salvin, Cat. Strickl. Coll. p. 454 (1882); Ramsay, Tab. List, p. 16, n. 481 (1888); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 254 (1889); Rams. Cat. Austr. B., Psittaci, p. 12 (1891).

Calopsitta greyi (errore), Rchnw. Journ. f. Orn. 1881, p. 38 (Consp.

Psitt. p. 38) (in syn. C. novæ hollandiæ, l. c.).

Adult male. Dark grey, the uropygium and the upper tail-coverts much lighter; forehead and cheeks lemon-yellow; crest grey, with the base of the feathers lemon-yellow; ear-coverts reddish orange; small wing-coverts and primary-coverts dusky, nearly black; a large white patch covers the median and greater wing-coverts as well as part of the secondaries; four middle tail-feathers mealy grey; primaries and lateral tail-feathers slate-grey: iris dark brown; bill bluish lead-colour; feet bluish grey. Total length 12.5 inches, wing 6.5, tail 6.6, bill 0.65, tarsus 0.6.

Female. Paler than the male; forehead and cheeks yellowish grey; lower abdomen and under tail-coverts with dark grey and pale yellow bands; lower back, upper tail-coverts, and four middle tail-feathers grey, with irregular narrow whitish bands; the lateral tail-feathers darker, freekled and banded with yellow; the outer tail-feathers yellow, with black irregular bars on the inner web.

Same size as male.

Hab. The whole of Australia, except North-eastern Queensland.

 Ad. st. b. Ad. sk.  $c, d. \ \beta \$  ad. sk.  $e, f. \$  Ad. sk. g-i.  $\not\subset Q$  ad. sk. k-n. ♂♀ ad. sk. o, p. 3 ad. sk.

q. Ad. sk. r.  $\mathcal{J}$  ad. sk. s. Ad. sk. t, u. Ad. sk. v. w. Skeletons. Australia. Australia. Australia, May, August. Australia. Australia (J. T. Cockerell). N.W. Australia, April. N.W. Australia.

N.W. Australia. River Murray, Oct. Benke, R. Darling. New South Wales.

J. R. Reeves [P.]. Purchased. Sir T. Mitchell [P.]. Sir D. Cooper [P.]. Salvin-Godman Coll. J. R. Elsey, Esq. [P.]. Capt. Bowyer Bower [P.].

Tweeddale Coll. Gould Coll. Gould Coll. Gould Coll.

# Family V. PSITTACIDÆ.

It is extremely difficult to define the *Psittacidæ* by positive characters. They are separated from the *Stringopidæ* by having a complete sternum, from the *Nestoridæ*, *Loriidæ*, and *Cyclopsittacidæ* by the file-like surface on the palatine portion of the hook of the bill, and from the *Cacatuidæ* by the absence of a crest (except in *Nymphicus*).

They occupy a very extensive area, being distributed all over the intertropical regions: they are the only Parrots found in the Neotropical, the southern part of the Nearctic, and the Æthiopian regions; in the Eastern Oriental region they meet with the Cacatuidæ, and in the Australian they are found associated with all the

other families.

 $\alpha$ .

# Key to the Subfamilies.

Key to the Subjamilies.	
Tail spined; size very small: females [p. 138. different from the males 1. NASITERNINÆ, Tail soft.	
<ul> <li>a'. Furcula present (except in the genera         Psittacula and Agapornis).     </li> <li>a". Left carotid superficial.</li> </ul>	
a'''. Orbital ring often complete; plumage mostly green.	
<ul> <li>a<sup>4</sup>. Tail rather long, generally graduated and cuneated 2. CONURINÆ, p. 145.</li> <li>b<sup>4</sup>. Tail moderate or short, not cu-</li> </ul>	
neated; cere always naked 3. <i>PIONINÆ</i> , p. 267. b'''. Orbital ring always incomplete; plumage grey or black, partially	
red or with no red at all; sides of the head more or less naked;	
tail-feathers never acuminate; bill never red	
one running in the hypoapophysial canal; orbital ring always incomplete; sides of the head feathered,	
if naked, only immediately round the eyes; tail-feathers frequently	
acuminate; bill often very strong, and, especially the upper mandible, frequently red: females mostly dif- [p. 386.	
ferent from the males 5. PALÆORNITĤINÆ, b'. Furcula absent; orbital ring incomplete; tail rather long, graduated, often [p. 539.	
broad; bill moderate, never red 6. PLATYCERCINÆ,	

# Subfamily I. NASITERNINÆ.

Bill shaped as in Cockatoos, broad at the base, compressed on the culmen, with a strong ridge before the hook; cere like a broad band, which, however, is narrower over the culmen and thickens round the nostrils, as in the *Platycercinæ*. Tail short, square, the feathers with projecting and pointed shafts. Wings long, twice the length of the tail, and when folded reaching the tip of the tail. Toes long and thin. Size very small. Sexes different.

Range. Papuan subregion.

1. NASITERNA.	Type.
Psittacus, subgen. Micropsitta (!), Less. Tr. d'Orn. p. 646	• •
(1831)	
Range. Papuan subregion.	
(Cf. Forbes, P. Z. S. 1880, pp. 76, 77.)	
Key to the Species.	
<ul> <li>a. Under tail-coverts red</li></ul>	
parts; anterior part of the cheeks, near the base of the lower mandible, blue finschi d'b''. No red colour on the middle of the breast and abdomen.  c'''. Pileum yellowish.	7, p. 142.
<ul> <li>a<sup>4</sup>. Smaller, wing 2·3 inches; underparts yellowish green; pileum yellowish, but not well defined all round pygmæa</li> <li>b<sup>4</sup>. Larger, wing 2·52 inches; underparts greener, pileum yellower and better</li> </ul>	
defined	♂♀, p. 142.
mandible reddish or rose-colour finschi !  d¹. Pileum green all round, blue in the middle	

## 1. Nasiterna bruijni.

Nasiterna bruijni, Salvad. Ann. Mus. Civ. Gen. vii. p. 715 (note), 753 (\$\delta\$), 907 (\$\Qeal\$), t. 21 (1875); Sclat. Ibis, 1876, p. 255; Salvad. Ann. Mus. Civ. Gen. x. p. 25, n. 8 (1877); Oust. Bull. Soc. Philom. de Paris, 1877, p. 55; Gould, B. of New Guin. pt. vi. pl. 10 (1878); Salvad. Orn. Pap. e Mol. i. p. 115 (1880); Rehnw. Vogelbild. t. 25. f. 1 (1878-83); id. Journ. f. Orn. 1881, p. 143 (Consp. Psitt. p. 79); Guillem. P. Z. S. 1885, p. 618; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 156 (1889); Tristr. Cat. Coll. B. p. 73 (1889); De Vis, Ann. Rep. Brit. New Guin. p. 58 (Musgrave Range) (1890); id. Colon. Papers, n. 103, p. 107 (1890); id. Ibis, 1891, p. 28; Salvad. Mem. R. Ac. Sc. Tor. (2) xlii. p. 89 (1891).

Adult male. Green, the green feathers narrowly edged with blackish; pileum, cheeks, and ear-coverts buff-red; a band from behind the eyes encircling the pileum, nape, and a collar round the neck deep blue; middle of the breast and of the abdomen and under tail-coverts salmon-red; the red breast on each side edged with blue feathers; sides and flanks green; upper wing-coverts deep black broadly edged with green; quills black, with narrow green edges on the outer webs, the inner secondaries with broader green edges, the last secondaries near the back entirely green; quills underneath blackish, under wing-coverts tinged with greenish, and some with yellowish; two central tail-feathers blue, with a black subapical spot, the remainder black, the outer three on each side with an orange spot at the tip of the inner webs, the first and the second with a bluish-olive spot at the tip of the outer web: bill and feet brown. Total length 3.62 inches, wing 2.65, tail 1.1, bill 0.32, tarsus 0.31.

Female. Green, underneath paler, yellowish along the middle of the underparts; pileum blue; cheeks and edge of the forehead reddish grey; throat whitish, with a greyish or bluish tinge; under tail-coverts yellowish green; wings and tail as in the male, only the outer tail-feathers have the spots at the tip of the inner webs yellow, with scarcely any orange tinge. Size very little less than that of the male.

Hab. Arfak Mountains (and Musgrave Range?), New Guinea.

## 2. Nasiterna pygmæa.

Psittacus (Psittacula) pygmæus, Quoy & Gaim. Voy. de l'Astrol., Zool. i. p. 232, pl. 21. f 1 (3), 2 (2) (1830) (type examined). Nasiterna pygmæa, Wuyl. Mon. Psitt. p. 631 (1832); G. R. Gr. Gen. B. ii. p. 423 (1846); Bp. Consp. i. p. 6 (1850); id. Rev. et Mag. de Zool. 1854, p. 156; id. Naumannia, 1856, Consp. Psitt. n. 232; Selat. Journ. Pr. Linn. Soc. ii. p. 166, n. 119 (1858); G. R. Gr. P. Z. S. 1858, p. 195; id. List Psitt. Brit. Mus. p. 92 (1859); id. Cat. B. New Guin. pp. 43, 60 (1859); id. P. Z. S. 1861, p. 437; Schleg. Journ. f. Orn. 1861, p. 377; Rosenb. Journ. f. Orn. 1862, pp. 63, 64, 68; Wall. P.Z. S. 1862, p. 165, 1864, pp. 281, 293; Rosenb. Nat. Tijdschr. Ned. Ind. xxv. p. 226, n. 32 (1863); id. Journ. f. Orn. 1864, p. 115, n. 32; Bernst. Nat. Tijdschr. Ned. Ind. xxvii. p. 297 (1864); id. Ned. Tijdschr. Dierk. ii. p. 327 (1865); Finsch, Neu-Guin. p. 158 (1865); Schleg. Ned. Tijdschr. Dierk. iii. p. 331 (1866); Rosenb. Reis naar de Zuidoostereil. p. 49 (1867); Finsch, Papay. i. p. 325 (1867); G. R. Gr. Hand-list, ii. p. 168, n. 8381 (1870); Schleg. Ned. Tijdschr. Dierk. iv. pp. 5, 7 (1871); id. Mus. P.-B. Psittaci, Revue, p. 71 (1874); Rosenb. Reist, naar Geelvinkb. p. 56 (1875); Salvad. Ann. Mus. Civ. Gen. vii. p. 985 (1875); Meyer, Sitzb. Isis zu Dresd. 1875, p. 76; Rowley, P. Z. S. 1875, p. 470; id. Orn. Misc. i. p. 154, pl. xix. (\$\delta\$), xx. (\$\phi\$) (1876); Finsch, Orn. Misc. i. p. 161 (1876); Salvad. Ann. Mus. Civ. Gen. x. p. 25, n. 9 (1877); Gould, B. of New Guin. pt. vi. pl. vii. (1878); Salvad. Orn. Pap. e Mol. i. p. 117 (1880); Forbes, P. Z. S. 1880, p. 76; Rehnw. Vogelbild. t. xxv. f. 2 (1878-83); id. Journ. f. Orn. 1881, p. 143 (Consp. Psitt. p. 79); Nehrk. Journ. f. Orn. 1885, p. 618; Salvad. Mem. R. Ac. Sc. Tor. (2) xl. p. 156 (1889); Meyer, Voyel-Skelett. t. xxii. (1878–89); Tristr. Cat. Coll. B. p. 72 (1889).

Micropsitta pygmæa, Less. Compl. de Buff., Ois. ix. p. 210, pl. 16.

f. 1, 2 (1837); id. op. cit. 2nd ed. p. 607, pl. —. f. 1, 2 (1838). Micropsites pygmæus, Bourj. Perr. pl. 100 (1837–38). Psittacus pygmæus, S. Müll. Verh. Land- cn. Volkenk. pp. 27, 107 (1839–44); Schley. Handl. d. Dierk. i. p. 480, pl. iii. n. 37 (1858). Psittacus (Nasiterna) pygmæus, Schleg. Handl. d. Dierk. i. p. 185. Psittacula pygmæa, Schleg. Dierent. p. 67 (cum fig.) (1864); id.

Mus. P.-B. Psittaci, p. 74 (1864). Nestor (!) pygmæa (sic), Rosenb. Zool. Gart. 1878, p. 347 (part). Nasiterna mysoriensis, Tristr. (nec Salvad.), Cat. Coll. B. p. 73

(1889) (specimen examined).

Adult male. Green, each feather narrowly edged with dusky, underneath paler; pileum yellowish; the feathers on the forehead faintly edged with reddish; cheeks brown with some bluish tinge; the middle of the breast and of the abdomen red; under tail-coverts yellow, the outer ones greenish; smaller upper wing-coverts black in the middle and broadly edged with green; quills dusky, the primaries narrowly edged with green on the outer web, the secondaries broadly edged with green, the inner ones entirely green; two middle tail-feathers blue, the remainder black, the outer one edged with green on the outer web, the three outer ones with a yellow spot at the tip of the inner webs: bill brown; feet paler. Total length 3·1 inches, wing 2·3, tail 1, bill 0·35, tarsus 0·3.

Adult female. Differs from the male in having the pileum more greenish, and the breast and abdomen green, without the red colour along the middle; on the brown cheeks there is no bluish tinge.

Hab. North-western New Guinea, Waigiou, Guebeh, Salwatty,

Mysol, and Koffiao.

a-g.  $\mathcal{J} \circ \mathfrak{A}$  ad. sk.

New Guinea.

#### 3. Nasiterna finschi.\*

Nasiterna finschii, Ramsay, Pr. Linn. Soc. N. S. W. vi. p. 180 ( $\mathfrak{P}$ ), 720 (3 and young) (1881); Nature, vol. xxiv. p. 277 (1881), vol. xxv. pp. 282, 356 (1882); Tristr. Ibis, 1882, pp. 138, 143; Ramsay, Ibis, 1882, p. 472; Salvad. Ann. Mus. Civ. Gen. xviii. p. 418, n. 1 (1882); id. Orn. Pap. e Mol. iii. p. 513 (1882); Ramsay, Pr. Lim. Soc. N. S. W. vii. pp. 35, 665 (1882); Rehnw. Voyebild. Nachtr. 26 (1883); id. Journ. f. Orn. 1883, p. 416; Sclat. P. Z. S. 1883, p. 347; Finsch, Vög. der Südsee, p. 17; Salvad. Mem. R. Ac. Sc. Tor. (2) xl. p. 157 (1889); Tristr. Cat. Coll. B. p. 73.
Nasiterna mortoni, Ramsay, Pr. Linn. Soc. N. S. W. vii. pp. 35, 666

(♀) (1882); Salvad, Mem. R. Ac. Sc. Tor. (2) xl. p. 157 (1889).

Adult male. Grass-green on the upper parts, paler and with yellowish on the lower parts; middle of the abdomen orange-red; under tail-coverts yellow, the longest bluish green at the tips; thighs pale yellow; anterior part of the cheeks near the base of the lower mandible tinged with blue; smaller and median upper wingcoverts green, black in the middle; quills black, edged with green on the outer webs; centre tail-feathers bluish green, with a very large black spot near the tips, the remainder black, the outer one green on the outer web, the three or four (?) outer ones with a yellow spot at the tip of the inner webs. "Total length 4.3 inches, wing 2.6, tail 1.6, bill 0.38" (Ramsay).

Adult female. Differs from the male in having the anterior part of the cheeks, near the base of the under mandible reddish or rosecolour, and no orange-red colour along the middle of the abdomen, which is yellowish green: "iris dark hazel; bill and feet ashcolour" (Richards). Total length about 4 inches, wing 2.4, tail 1.3.

Hab. San Cristoval and Ugi, Solomon Islands.

Makira Harbour, San Cristoval, August Tristram Coll.  $a. \ \ 2$  ad. sk. (Lieut. Richards).

#### NASITERNA NANINA.

Nasiterna nanina, Tristr. Ibis, 1891, p. 608 (♀).

Female. Green, hind neck paler, underparts bright yellowish green; forehead yellowish, cheeks and chin pale rose-colour; quills black, edged with green; central tail-feathers blue, with the shaft black, remaining tail-feathers black, with a yellow spot at the tip of the inner web and with a green one at the tip of the outer web. Total length 2.8 inches, wing 1.9, tail 0.7, tarsus 0.2.

Hab. Bugotu, Solomon Islands, south of Isabel.

If the type specimen is fully adult, N. nanina is very different from all the other known species by its diminutive size; in colouring it is very similar to the female of N. finschi, which has been described as a distinct species under the name of N. mortoni, Rams.

<sup>\*</sup> I know the following species from the description only, published whilst this sheet is passing through the press:-

#### 4. Nasiterna keiensis.

Nasiterna pygmæa, part., Schleg. Ned. Tijdschr. Dierk. iii. p. 331 (specim. from Arrou Isl.) (1866): Rosenb. (nec Q. et G.) Reis naar de Zuidoostereil. pp. 48, 49 (Arrou Isl.) (1867); Schleg. Ned. Tijdschr.

Dierk. iv. pp. 5, 7 (partim) (1871); id. Mus. P.-B. Psittaci, p. 71 (partim) (1874); Rosenb. Malay. Archip. p. 371 (1878–79).

Nasiterna keiensis, Salvad. Ann. Mus. Civ. Gen. vii. p. 984 (1875), x. p. 26, n. 10 (1877); Gould, B. of New Guin. pt. vi. pl. 13 (1878); D'Alb. § Salvad. Ann. Mus. Civ. Gen. xiv. p. 29 (Fly Piver) (1879); Salvad. Ann. Mus. Civ. Gen. xiv. p. 10 (1879). River) (1879); Salvad. Ann. Mus. Civ. Gen. xiv. p. 10, n. 6 (1879); id. Orn. Pap. e Mol. i. p. 120 (1880); Rehnw. Vogelbild. t. xxv. f. 4 (1878–83); id. Journ. f. Orn. 1881, p. 141 (Consp. Psitt. p. 77); Salvad. Mem. R. Ac. Sc. Tor. (2) xl. p. 156.

Nasiterna aruensis, Salvad. Ann. Mus. Civ. Gen. vii. p. 985 (e.r.

Schlegel) (1875), x. p. 25, note 2 (1877).

Nestor (!) pygmæa, part., Rosenb. Zool. Gart. 1878, p. 347.

Adult male. Very much like the female of N. pygmaa, but larger, with the feathers of the pileum yellower and edged with reddish; the breast and the abdomen brighter and purer green, with no yellow tinge. Total length 3.7 inches, wing 2.52, tail 1.1, bill 0.37. Female. Pileum paler than in the male and with no red edges to the feathers. Young. Like the female.

Hab. Key and Aru Islands, and Southern New Guinea along the

Fly River.

#### 5. Nasiterna aolæ.

Nasiterna aolæ, Grant, P.Z.S. 1888, p. 189, pl. x. f. 2; Salvad. Mem. R. Ac. Sc. Tor. (2) xlii, p. 89 (1891).

Adult male. Grass-green, cheeks and lower parts paler, yellowish green; crown and anterior part of the cheeks near the base of the lower mandible blue; under tail-coverts yellow, tipped with green; quills black, edged with green on the outer webs; centre tailfeathers blue, the remainder black with bluish-green tips; the three outer tail-feathers with a yellow spot at the tip of the inner webs; the first outer tail-feather green on the outer web: "bill black; legs grey; iris red (!)" (Woodford). Total length about 3.9 inches, wing 2.4, tail 1.15, bill 0.35, tarsus 0.33.

Adult female. Like the male, but a little smaller and with the anterior part of the cheeks, near the base of the lower mandible,

and the chin reddish.

Hab. Guadalcanar, Solomon Islands.

a, b, c, o Q ad. sk. Aola, Guadalcanar, June, April. C. M. Woodford [C.]. (Types of species.)

### 6. Nasiterna misoriensis.

Nasiterna pygmæa geelwinkiana, part., Schleg. Ned. Tijdschr. Dierk. iv. p. 7 (1871); Rosenb. Reist. naar Geelvinkb. p. 137 (partim).

Nasiterna geelwinkiana, part., Schleg. Mus. P.-B. Psittaci, Revue, p. 71 (1874) (specimen from Soek); Meyer, Sitzb. d. Isis zu Dresd. 1875, p. 76 (partim); Finsch, Rowl. Orn. Misc. i. p. 160 (\$\pi\$ et jun. from Kordo) (1876); Becc. Ann. Mus. Civ. Gen. vii. p. 714 (partim) (1875); Rosenb. Zool. Gart. 1878, p. 347 (partim).

Nasiterna misoriensis, Salvad. Ann. Mus. Civ. Gen. vii. p. 909 (1875), x. p. 26, n. 11 (1872); id. Orn. Pap. e Mol. i. p. 122 (1880); Rehnw. Vogelbild. t. xxv. f. 6 (1878-83); id. Journ. f. Orn. 1881, p. 142 (Consp. Psitt. p. 78); Salvad. Mem. R. Ac. Sc. Tor. (2) xl. p. 157 (1889).

Nasiterna misorensis, Sclat. Ibis, 1876, p. 358; Gould, B. of New

Guin. pt. vi. pl. 9 (1878).

Adult male. Green; head entirely brown, except a yellow spot on the occiput; a bluish collar scarcely perceptible round the neck; middle of the breast and abdomen ochre-yellow; under tail-coverts vellow: upper wing-coverts black, broadly edged with green; quills as in N. pygmæa; two centre tail-feathers blue, with the shaft black, the remainder black, with the outer web edged with green towards the base and with blue towards the tip; at the tip of their inner web there is a yellow spot: bill dusky, rather strong and deep: feet dusky: "irides orange-red" (Beccari). Total length 3.55 inches, wing 2.45 to 2.3, tail 1.2, bill 0.38, tarsus 0.34.

Female. Green, middle of the underparts greenish vellow: pileum brown, each feather edged with blue; cheeks brown, with the edges of the feathers slightly tinged with blue; under tail-coverts

yellow; tail and wings as in the male.

Hab. Misori Islands, Geelvink Bay.

#### 7. Nasiterna maforensis.

Nasiterna pygmæa geelwinkiana, part., Schleg. Ned. Tijdschr. Dierk. iv. p. 7 (1871); Rosenb. Reist. naar Geelvinkb. p. 137 (partim) (1875).

Nasiterna geelwinkiana, part., Schleg. Mus. P.-B. Psittaci, Revue, p. 71 (1874) (specimens from Mafor); Meyer, Sitzsb. d. Isis zu Dresd. 1875, p. 76 (partim); Rowl. P. Z. S. 1875, p. 470; id. Orn. Misc. p. 153, pl. xviii. ♂ Q (1876); Becc. Ann. Mus. Civ. Gen. vii. p. 714 (partim) (1875); Rosenb. Zool. Gart. 1878, p. 347 (partim). Nasiterna pygmæa, Rosenb. (nec Q. § G.) Reist. naar Geelvinkh, p. 36 (1875).

Nasiterna maforensis, Salvad. Ann. Mus. Civ. Gen. vii. p. 908 (1875); Sclat. Ibis, 1876, p. 358; Salvad. l. c. x. p. 26, n. 12 (1877); Gould, B. of New Guin. pt. vi. pl. 8 (1878); Salvad, Orn. Pap. e Mol. i. p. 124 (1880); Rehnic. Vogelbild. t. xxv. f. 3 (1878-83); id. Journ. f. Orn. 1881, p. 142 (Consp. Psitt. p. 78); Salvad. Mem. R. Ac. Sc. Tor. (2) xl. p. 157 (1889).

Adult male. Green, pileum brown, the feathers edged with bright blue; a pale vellow spot on the occiput, scarcely visible; cheeks brown, with the edges of the feathers bluish; throat greenish brown, the feathers edged with bluish; middle of the breast and abdomen yellow, with an ochreous tinge; under tail-coverts lemon-yellow: wings as in N. misoriensis; two central tail-feathers blue with the shaft black, the remaining tail-feathers black, with the outer webs green towards the base, blue towards the tip, and with a yellow spot at the tip of the inner web: bill very deep and strong, dusky like the feet. Total length 3.55 inches, wing 2.3, tail 1.2, bill 0.38, tarsus 0.34.

Female. Like the female of N. misoriensis, green; middle of the underparts greenish yellow; pileum brown, each feather with blue edges; cheeks brown, with the edges of the feathers slightly tinged with blue; under tail-coverts yellow; wings and tail as in the male.

Hab. Mafor Island, Geelvink Bay.

## 8. Nasiterna pusio.

Nasiterna pusio, Sclat. P. Z. S. 1865, p. 620, pl. 36; Finsch, Papag. i. p. 327 (1867); Sclat. P. Z. S. 1869, pp. 124, 126; G. R. Gr. Hand-list, ii. p. 168, n. 8382 (1870); Schleg. Ned. Tijdschr. Dierk. iv. p. 5 (1871); Ramsay, Pr. Linn. Soc. N. S. W. i. p. 67 (1876); Rowl. Orn. Misc. i. p. 155, pl. xxi. (1876); Finsch, Orn. Misc. i. p. 163 (1876); Ramsay, Pr. Linn. Soc. N. S. W. i. p. 393 (1876); Sclat. P. Z. S. 1877, p. 108, n. 38; Salvad. Ann. Mus. Civ. Gen. x. p. 26, n. 14 (1877); Gould, B. of New Guin. pt. vi. pl. 12 (1878); Sclat. P. Z. S. 1878, p. 289; Camerano, Atti R. Ac. Sc. Tor. xiii. p. 301, pl. xvi. (1878); Finsch, P. Z. S. 1879, p. 11; Salvad. Orn. Pap. e. Mol. i. p. 127 (1880); Rehnw. Fogelbild. t. xxv. f. 5 (1878–83); id. Journ. f. Orn. 1881, p. 141 (Consp. Psitt. p. 77); Tristr. Ibis, 1882, p. 140; Sclat. ibid. note; Tristr. l. c. p. 143, n. 63; Ramsay, Ibis, 1882, p. 473; Salvad. Orn. Pap. e. Mol. iii. p. 514 (1882); Sclat. P. Z. S. 1883, p. 347; Finsch, Fög. d. Südsee, p. 17 (New Britain); Tristr. Cat. Coll. B. p. 73 (1889); id. Ibis, 1889, p. 557 (St. Aignan Isl.); Salvad. Mem. R. Ac. Sc. Tor. (2) xl. p. 157 (1889), xlii. p. 89 (1891).

Nasiterna pygmæa salomonensis, Schleg. Ned. Tijdschr. Dierk. iv.

p. 1 (1871). Vasiterna pusi

Nasiterna pusilla, Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 104 (1877), iii. p. 251 (1879), iv. p. 96 (1879); Salvad. Ibis, 1879, p. 320; id. Orn. Pap. e Mol. i. p. 128 (1880); Rehnw. Journ. f. Orn. 1881, p. 142 (Consp. Psitt. p. 78); Sharpe, Journ. Linn. Soc., Zool. xvi. p. 425 (1882); Ramsay, Ibis, 1882, p. 473; Salvad. Ann. Mus. Civ. Gen. xviii. p. 418, n. 2 (1882); id. Orn. Pap. e Mol. iii. p. 514 (1882); Rehnw. Vogelbild. Nachtr. 27 (1883); Salvad. Mem. R. Ac. Sc. Tor. (2) xl. p. 157 (1889).

Adult male. Green, paler underneath, and yellowish along the middle of the breast and of the abdomen; forehead, sides of the head, and chin ochre-yellow, crown dull blue; under tail-coverts yellow, the outer ones tinged with green; upper wing-coverts black, broadly edged with green; quills dusky, primaries edged with green on the outer webs; under wing-coverts yellowish; two central tail-feathers blue with a black subapical spot, the remainder black, edged with green on the outer webs, and with a yellow spot at the tip of the inner web: bill and feet dusky. Total length 3·3 inches, wing 2·45 to 2·6, tail 1, bill 0·31, tarsus 0·28.

Female. Like the male, but forchead and cheeks paler.

Hab. Duke of York Islands, New Britain, St. Aignan's Isl., and S.E. New Guinea.

a. Ad. sk.	[Solomon Islands.]	P. L. Sclater [P.]. (Type of species.)
b, c, d. ♂♀ad. sk.	Duke of York Island, Jan., Oct. (Rev. & Brown & Hr. Kleinschmidt).	(Type of Speciess)
e. ♀ ad. sk.	Duke of York Island (G. E. Richards).	Tristram Coll.
f, y. Ad. sk.	Astrolabe Mountains.	A. Goldie [C.].
f, g. Ad. sk. h, i. Ad. sk.	Port Moresby.	A. Goldie [C.]. A. Goldie [C.].

#### 9. Nasiterna beccarii.

Nasiterna beccarii, Salvad. Ann. Mus. Civ. Gen. viii. p. 396 (♀) (1876), x. p. 26, n. 13 (1877); id. Atti R. Acc. Sc. Tor. xiii. p. 113 (1878); Gould, B. of New Guin. pt. vi. pl. 11 (1878); Salvad. Ibis, 1879, p. 320; id. Orn. Pap. e Mol. i. p. 125 (1880); Rehnw. Journ. f. Orn. 1881, p. 142 (Consp. Psitt. p. 78); id. Vogelbild. Nachtr. 27 (1883); Salvad. Mem. R. Ac. Sc. Tor. (2) xl. p. 157 (1889).

Adult female. Green, underparts much lighter; middle of the crown dull blue; edges of the feathers black; forehead and sides of the head brown; sides of the nape greenish brown; two centre tail-feathers blue, with a black spot near the tip; lateral rectrices black, edged externally with green and with a yellowish-orange spot at the tip of the inner web. Size of N. pygmea. (Mus. Civ. Genova.)

Hab. The coast of Geelvink Bay, south of Dorey, New Guinea. The brown cheeks and sides of the head distinguish at once this species from N. pusio, to which it is nearly allied.

# Subfamily II. CONURINÆ.

Tail graduated and generally long, with the feathers tapering to a point, and the two central ones always the longest. Bill strong, deeper than long, except in *Henicognathus*, generally without notch, and furnished on the palatine surface of the hook with a file-like surface; culmen flattened and grooved, or rounded and smooth. Cere, surrounding like a band the whole base of the bill, naked or sometimes covered with feathers; nostrils exposed or sometimes hidden by feathers; orbital ring in many genera complete. Plumage mostly green, in some species yellow or blue. No crest. Bill brown, horn-colour or whitish, never red; only in a few species pale reddish. Sexes alike, except in the genus *Psittacula*.

Range. America, from Carolina to Patagonia.

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# Key to the Genera.

a. General colour above and below blue.	
a'. Lores feathered; orbital ring incom-	Гр. 147.
	2. Anodorhynchus,
b'. Lores naked; (orbital ring incomplete?)	3. Cyanopsittacus,
b. Underparts never blue	[p. 150.
c'. Orbital ring complete; furcula present.	
a". Lores, and, more or less, also the	4.4.4. 3.50
cheeks naked	4.° Ara, p. 150.
$b^{\prime\prime}$ . Lores feathered.	
a"". Bill much compressed; lower	
mandible flattened and grooved in	
front; cere feathered	5. Rhynchopsittacus,
b'''. Bill not compressed, rather	p. 168.
swollen on the sides; lower man-	( 4
dible broad, not grooved.	
a <sup>4</sup> . Fourth primary attenuated, nos-	
trils exposed; ambiens muscle	
always well developed (Garrod).	6. Conurus, p. 170.
$b^4$ . Fourth primary not attenuated.	0. CONTROD, p. 1101
a <sup>5</sup> . Cere feathered; nostrils	
hidden.	
a <sup>6</sup> . Tail never entirely red.	
$a^{7}$ . Bill of moderate size.	
a <sup>8</sup> . Upper mandible sharply	
notched	7. Conuropsis, p. 203.
b <sup>s</sup> . Upper mandible not	0.70
sharply notched	8. Cyanolyseus, p. 205
$b^{\tau}$ . Bill very high, with the	
b <sup>7</sup> . Bill very high, with the lower mandible very	
broad	9. Gnathosittaca,
b <sup>6</sup> . Tail entirely dull red.	[p. 208.
$c^7$ . Upper mandible abnormal,	
very long and nearly	[р. 209.
straight	10. Henicognathus,
$d^7$ . Upper mandible normal.	11. Microsittace, p. 210.
b <sup>5</sup> . Cere naked; nostrils exposed;	, <u>, , , , , , , , , , , , , , , , , , </u>
tail frequently brown-red;	
ambiens muscle lost (Garrod)	12. Pyrrhura, d. 211.
d'. Orbital ring incomplete.	
c". Bill rather swollen on the sides;	
culmen rounded; oil-gland tufted.	
c'''. Furcula present.	
$c^4$ . Nostrils hidden by the feathers	
at the base of the bill projecting	
forwards	13 Wyopsteracus n 931
d <sup>4</sup> Nostrile arrocad and open in a	16. M1013111Accs, p. 201.
d <sup>4</sup> . Nostrils exposed and open in a cere much swollen all round	1.1 > BOLBORHYNGHUS
d'''. Furcula absent; tail rather short;	[p. 233.
e over different	15 \ Perma CIII 4 D 940
sexes different	19. I SITIACULA, p. 240.
d". Bill rather compressed; nostrils open	
in a cere naked all round the base	16 Promograma = 059
of the bill; no tufted oil-gland	10. Биотобентя, р. 203.

#### 2. ANODORHYNCHUS.

Type.

Anodorhynchus, Spir, Av. Bras. i. tab. xi.\* (1824). A. hyacinthinus. Aodorhynchus, Spix, Av. Bras. i. p. 25 (1824). Sittace, part., Wayl. Mon. Psitt. p. 499 (1832). Anodontorhynchus, Agassiz, Nomencl. Zool. Index Univ. p. 24 (1846). Anadorhynchus, Finsch, Papag. i. p. 387 (1867).

Anoplorhynchus, Sundev. Méth. Nat. Av. disp. Tent. p. 70 (1872) ...... A.hyacinthinus.

Range. Central Brazil and Paraguay.

## Key to the Species.

greenish blue ...... leari, p. 148. c. Greenish blue; head and neck with a distinct greyish tinge, darker on the cheeks, throat, and upper breast . . . . . . . . . . . . . . . . . glaucus, p. 149.

## 1. Anodorhynchus hyacinthinus.

Psittacus hyacinthinus, Lath. Ind. Orn. i. p. 84, n. 5 (1790); Bechst. Lath. Ueb. p. 66, n. 7 (1811); Kuhl, Consp. Psitt. p. 16 (1820); Voigt, Cuv. Uebers. p. 724 (1831).

Psittacus augustus, Shaw, Mus. Lever. p. 59, pl. 2 (1792); id. Nat.

Misc. xv. pl. 609 (1804); id. Gen. Zool. viii. 2, p. 393 (1811).

Hyaeinthine Maccaw, Lath. Gen. Syn. Suppl. ii. p. 80 (1802); id. Gen. Hist. ii. p. 109 (1822).

Macrocercus hyacinthinus, Vieill. N. D. ii. p. 260 (1816); id. Enc. Méth. iii. p. 1416 (1823); Less. Tr. d'Orn. p. 186 (1831); Burm. Synt Lik. ii. p. 150 (1856). Pater Nature p. 1416 (1823); Euro. Syst. Ueb. ii. p. 159 (1856); Bates, Natur. on the Amaz. i. p. 133, ii. p. 138 (1863), 5th ed. pp. 68, 228 (1879). Anodorhynchus maximiliani, *Spix*, *Av. Bras.* i. tab. xi. (sine descr.) (1824); *Steph. Gen. Zool.* xiv. p. 114 (1826).

Aodorhynchus maximiliani augusti, Spix, Av. Bras. i. p. 25 (1824).

Macrocercus? augustus, Steph. Gen. Zool. xiv. p. 113 (1826).

Sittace hyacinthina, Wagl. Mon. Psitt. p. 676 (1832); Finsch, Papag. i. p. 389 (1867), ii. p. 942 (1868); Pelz. Orn. Bras. pp. 254, lii (Rio Araguay, Rio das Flechas, Ribeirao das Flechas, Natterer) (1871); id. Ibis, 1873, p. 31; Gieb. Thes. Orn. iii. p. 495 (1877); Rehnw. Vogelbild. t. ix. f. 2 (1878–83); id. Journ f. Orn. 1881, p. 265 (Consp. Psitt. p. 153); Pelz. & Lor. Ann. naturh. Hofmus. 1888, p. 38.

Psittacara cobaltina, Bourj. Perr. pl. 16 (1837–38).

Anodorhynchus hyacinthinus, G. R. Gr. List Gen. B. p. 51 (1840); Bp. Rev. et Mag. de Zool. 1854, p. 149, n. 1; Souancé, Rev. et

<sup>\*</sup> Mr. Waterhouse (Ind. Gen. Av. p. 11) quotes p. 47 of Spix's work, where I cannot find mentioned the genus Anodorhynchus; curiously enough also Spix, who spells it Aodorhynchus, in the Index of the first volume of his work, by misprint quotes p. 48 instead of 25.

Mag. de Zool. 1856, p. 56; Bp. Naumannia, 1856, Consp. Psitt. n. 1; Finsch, Ned. Tijdsch. Dierk. i. Berigt. p. xiii (1863); Sousa, Mus. Nac. Lisbou, Psittaci, p. 7 (Peru!) (1869); G. R. Gr. Handist, ii. p. 145, n. 8086 (1870); Sundev. Meth. Nat. av. disp. Tent. p. 70 (1872).

Araras hyacinthinus, Brehm, Mon. d. Papag. t. 4 (1842); Schleg. Mus. P.-B. Psittaci, p. 2 (1864); id. op. cit. Revne, p. 1 (1874). Anadorhynchos maximiliani, Brehm, Mon. d. Papag. Heft iii. p. 11

(1842).

Ara hyacinthina, G. R. Gr. Gen. B. ii. p. 412, n. 11 (1845); Hartl. Journ. f. Orn. 1851, p. 41; G. R. Gr. List Psitt, Brit. Mus. p. 29 (1859); Schley. Dierent. p. 80 (with figure) (1864); Sclat. & Salv. P. Z. S. 1867, pp. 587, 595 (Tocantins and Tapajos); Sclat. & Salv. Nomencl. Av. Neotrop. p. 111 (1873); Selat. P. Z. S. 1875, p. 643, 1878, p. 976, 1879, p. 551; *id. List Vert. An.* 8th ed. p. 338 (1883); *Riker, Auk*, 1890, p. 131. Ara hyacinthe, *Casteln. Expéd. Hist. Voy.* i. p. 440 (1850) (Ara-

guay); Des Murs, in Casteln. Exp. Am. du Sud, Ois. p. 12 (1855). Blue Macaw, Wall. Travels, p. 75 (1853).

Ara hyacinthinus, Hartl. Journ. f. Orn. 1859, p. 257.

Adult. Cobalt-blue, nearly uniform, head and neck a little lighter; underparts duller; inner webs of the quills towards the base, greater under wing-coverts, quills, and tail-feathers underneath black; naked skin round the eyes and at the base of the under mandible yellow: iris brown; bill black; feet blackish. Total length about 34 inches, wing 15, tail 20.5, bill 3.6, tarsus 1.4. Hab. Central Brazil and Mattogrosso.

a. Ad. sk. Interior of Brazil. Purchased. b. Ad. sk. Salvin-Godman Coll. Amazons. c. Ad. sk. Tapajos (Bates). Purchased. d. Skeleton,

# 2. Anodorhynchus leari.

Macrocercus hyacinthinus, Vieill. Gal. des Ois. pl. 24 (but not the text) (1823); Lear, Parrots, pl. 9 (1832).

? Ara hyacinthe, Less. Compl. de Buff. p. 201 (part.), pl. 29. f. 1

(1837).

Macrocercus (Cyanopsitta) glaucus, var., Souancé, Rev. et Mag. de Zool. 1856, p. 57.

Anodorhynchus leari, Bp. Naumannia, 1856, Consp. Psitt. n. 2; Souancé, Icon. Perr. pl. i. f. 1 (1857); G. R. Gr. Hand-list, ii. p. 145, n. 8088 (1870).

Ara leari, G. R. Gr. List Psitt. Brit. Mus. p. 30 (1859); id. List Vert. An. 8th ed. p. 338 (1883); id. P. Z. S. 1886, p. 417. Ara glauca, Sclat. (nec Vicill.) P. Z. S. 1860, p. 372; id. List Vert.

An. (1877), p. 240; id. P. Z. S. 1878, p. 976.

Sittace leari, Finsch, Papag. i. p. 392 (1867); Pelz. Orn. Bras. p. 254 (note) (1871); Gieb. Thes. Orn. iii. p. 495 (1877); Rehnw. Journ. f. Orn. 1881, p. 265 (Consp. Psitt. p. 153); id. Vogelbild. Nachtr. 71 (1883).

Adult male. Cobalt-blue; head, neck, and lower parts greenish blue; back, scapulars, and wing-coverts with narrow paler edges;

the feathers of the abdomen distinctly edged with bluish green; inner webs of the quills towards the base, greater under wingcoverts, and quills underneath blackish grey; tail underneath black: naked skin round the eyes and at the base of the lower mandible yellow; iris black; bill black; feet blackish. length 28.5 inches, wing 13.8, tail 16, bill 3, tarsus 1.3.

Hab. Probably some part of Brazil.

a. d ad. sk.

Brazil? (Zool. Soc. Gard.).

Sclater Coll.

### 3. Anodorhynchus glaucus.

Guacamayo azul, Azara, Apunt. Hist. nat. Parag. i. p. 402, n. 273 (1802).

Guacamayo blen, Azara, Voy. (ed. Sonn.), iii. p. 53 (1809).

Macrocercus glaucus, Vieill. N. D. ii. p. 259 (1816); Burm. Syst. Ueb. ii. p. 160 (1856).

Macrocercus hyacinthinus, part., Vieill. Gal. Ois. pt. 2, p. 3 (1823?); id. Enc. Méth, iii. p. 1416 (partim) (1823); Less. Tr. d'Orn. p. 186

(partim) (1831).

Sittace glauca, Wagl. Mon. Psitt. p. 676, t. xxvi. (1832); Finsch, Papag. i. p. 391 (1867); Pelz. Orn. Bras. p. 254 (note) (1871); Gieb. Thes. Orn. iii, p. 495 (1877); Rehnw. Vogelbild. t. ix. f. 1 (1878–83); id. Journ. f. Orn. 1881, p. 266 (Consp. Psitt.

Psittacara glauca, Bourj. Perr. pl. 14 (1837–38).

 Psittacus glaucus, Hahn, Orn. Atl., Papag. p. 97, t. 76 (1840).
 Ara glauca, G. R. Gr. Gen. B. ii. p. 412, n. 12 (1845); id. List
 Psitt. Brit. Mus. p. 30 (1859); Sclat. & Salv. Nomencl. Av. Neotrop. p. 111 (1873); Sclat. P. Z. S. 1879, p. 551, 1886, pp. 320,
417; Berl. Journ. f. Orn. 1887, p. 121.

? Ara hyacinthe, Des Murs, in Casteln. Exp. Am. du Sud, Ois. p. 11

(Paraguay) (1855).

Macrocercus (Cyanopsitta) glaucus, Bp. Rev. et May. de Zool. 1854, p. 149, n. 2; Souancé, Rev. et May. de Zool. 1856, p. 56.

Anodorhynchus glaucus, Bp. Naumannia, 1856, Consp. Psitt. no. 3; Souancé, Icon. Perr. pl. i. f. 2 (1857); G. R. Gr. Hand-list, ii. p. 145, n. 8087 (1870).

Arara glauca, Schleg. Mus. P.-B. Psittaci, p. 2 (1864); id. op. cit.

Revue, p. 1 (1874).

Adult male. Greenish blue, head and neck with a distinct greyish tinge, cheeks, throat, and upper breast tinged with brownish; the underparts and under wing-coverts greener; greater under wingcoverts, inner web of the quills towards the base, quills and tailfeathers underneath blackish: naked skin round the eyes and at the base of the lower mandible yellow; bill black; feet blackish. Total length about 29 inches, wing 14.5, tail 15, bill 2.7, tarsus 1.22.

Hab. Paraguay, Uruguay, and Southern Brazil.

a. Ad. st. b. ♂ ad. sk.

Paraguay. Paraguay.

Massena Coll. Salvin-Godman Coll.

#### 3. CYANOPSITTACUS.

Type.

Macrocercus, subgen. Cyanopsitta, Bp. Rev. et Mag. de Zool. 1854, p. 149 .... C. spixi.

Range. Province of Bahia.

# 1. Cyanopsittacus spixi.

Arara hyacinthinus, Spix (nec Lath.), Av. Bras. i. p. 25 (1824). Ara hyacinthinus, Spix (nec Lath), Av. Bras. i. tab. xxiii. (1824). Sittace spixii, Wayl. Mon. Psitt. p. 675 (1832); Finsch, Papag. i. p. 393 (1867), ii. 2, p. 942 (1868); Pelz. Orn. Bras. p. 254 (note) (1871); Gieb. Thes. Orn. iii. p. 497 (1877); Rehnw. Journ. f. Orn. 1881, p. 266 (Consp. Psitt. p. 154); id. Vogelbild. Nachtr. 72

Psittacus hyacinthinus, Hahn (nec Lath.), Orn. Atl., Papag. p. 40,

t. 25 (1834).

Psittacara glauca minor, var. A, Bourj. Perr. pl. 15 (1837-38).

Arara hyacinthiacus, Brehm, Mon. d. Papag. t. 6 (1842).

Ana spixii, G. R. Gr. Gen. B. ii. p. 412, n. 13 (1845); id. List Psiti. Brit. Mus. p. 30 (1859); Sclat. & Salv. Nomencl. Av. Neotrop. p. 111 (1873); Sclat. P. Z. S. 1878, p. 976, pl. 1xi., 1879, pp. 300, 551; Forbes, Íbis, 1881, p. 316; ? Garlepp, Journ. f. Orn. 1889, p. 290.

Macrocercus (Cyanopsitta) spixi, Bp. Rev. et Mag. de Zool. 1854, p. 149, n. 3; Souancé, Rev. et Mag. de Zool. 1856, pp. 56, 57. Arara spixi, Bp. Naumannia, 1856, Consp. Psitt. no. 4; G. R. Gr. Hand-list, ii. p. 145, n. 8089 (1870).

Macrocercus spixii, Burm. Syst. Ueb. ii. p. 160 (1856).

Adult male. General colour blue, head and neck greyish blue, forehead and ear-coverts more grey; feathers of the back and rump, upper and under tail-coverts, and upper wing-coverts with narrow paler edges; breast and abdomen with a slight greenish tinge, each feather with paler edges; inner web of the quills, greater under wing-coverts, quills and tail-feathers underneath blackish: iris light vellow; naked skin round the eyes (and naked lores) black (Scluter); bill black; feet blackish. Total length about 22 inches, wing 11, tail 13.5, bill 1.4, tarsus 0.8.

Female. Like the male, only somewhat smaller. Hab. Rio San Francisco, prov. of Bahia (Spix).

a. Ad. sk. b. ♀ ad. sk. Brazil. Brazil (Zool. Soc. Gard.).

Massena Coll. Sclater Coll.

#### 4. ARA.

Type. Ara, Cuv. Lec. d'Anat. Comp. tab. ii. (1799)..... A. macao. Paracus, Rafinesque, Analyse, p. 65 (1813). 5 Sittace, part., Wayl. Mon. Psitt. p. 499 (1832). Macrochicus, Sw. Class. B. ii. p. 299 (1837). Araclanga, Glog. Hand- u. Hilfsbuch der Naturg. p. 193

(1842) (= Ara).Orthopaellaen le w 192.

makanleanna

Macrocercus, subgen. Ararauna, Bp. Rev. et Mag. de Zool. 1854, p. 149
Macrocercus, subgen. Aracanga, Bp. Rev. et Mag. de
Zool. 1854, p. 149
Primolius, <i>Bp. Compt. Rend.</i> xliv. p. 596 (1857) [A. auricollis: Paranus, <i>Rafinq</i> . (errore), <i>G. R. Gr. Hand-list</i> , ii. p. 144 (1870).
Range. From Mexico to South America as far as Bolivia and
Paraguay.
Key to the Species.
a. Lower back, rump, upper and under tail-coverts
blue.
a'. General colour not green.
a''. Upper parts blue, underparts yellow.
a'''. Throat black * ararauna, p. 152.
b". Throat green caninde, p. 153.
b". Upper and under parts red.
c'''. Cheeks and lores naked: larger, wing 15-15.5 inches; nape red.
a <sup>4</sup> . Cheeks with no feathered lines; ge-
neral colour vermilion-red; middle
wing-coverts chrome-yellow macao, p. 154.
b4. Cheeks with feathered lines; general
colour darker red or crimson, the
middle wing-coverts green chloroptera, p. 156.
d". Cheeks naked; lores partly feathered;
wing 11 inches; nape yellow tricolor, p. 157.
b'. General colour green. c''. Lower back, rump, and upper tail-coverts
light blue.
e'''. Geueral colour greener; lower back,
rump, and upper tail-coverts brighter
blue; smaller, wing 14 inches militaris, p. 158.
f'''. General green colour yellower; lower
back, rump, and upper tail-coverts
paler blue; larger, wing 16 inches v ambigua, p. 160.
d". Lower back, rump, and upper tail-coverts green; wing 12·3-6·5 inches.
g'". A red long patch behind the ears; tail
green, bluish towards the end rubrigena, p. 161.
h'''. No red patch behind the ears.
c <sup>4</sup> . Tail above brown-red towards the
base.
a <sup>5</sup> . Quills and tail-feathers dark red
below severa, p. 161.
olive below.
a. No yellow colour on the hind
neck.
$a^7$ . Forehead rose-red; a red patch
on the lower back, and an-
other on the middle of the
abdomen $maracana$ , p. 163. $b^7$ . No red colour on the forehead
and no red patches couloni, p. 164.
b. A yellow collar on the hind neck. auricollis. p. 165.
Jesses Jesse Jesses Jesse Jesses Jesses Jesses Jesses Jesses Jesses Jesses Jesses Jess

d. Tail above green, with no brown-red colour towards the base.

c<sup>5</sup>. Breast greyish; a brown-red patch on the lower abdomen and vent...

d<sup>5</sup>. Breast uniform green like the rest of the underparts; bend of the wing and under wing-coverts red. c. Larger; upper mandible white;

under mandible horn-black ... nobilis, p. 167.

d<sup>6</sup>. Smaller; both upper and under mandible horn-black ..... hahni, p. 168.

macavuanna, p. 165.

#### 1. Ara ararauna.

Psittacus maximus cyano-croceus, Aldr. Orn. i. p. 663 (1646).

Ararauna, Marcgr. Hist. Bras. libr. ix. p. 206 (1648).

The Blue and Yellow Maccaw, Edw. Birds, iv. pl. 159 (1751); Lath. Syn. i. p. 204, n. 4, with var. A, p. 205 (1781).

Ara jamaicensis cyaneo-crocea, *Briss. Orn.* iv. p. 191 (1760). Ara brasiliensis cyaneo-crocea, *Briss. Orn.* iv. p. 193, pl. xx. (1760). Psittacus ararauna, Linn. S. N. i. p. 139, n. 3 (1766); Scop. Ann. I.
 Hist. Nat. p. 27 (1769); Gm. S. N. i. p. 313, n. 3 (1788); Lath. Ind. Orn. i. p. 83, n. 4, with var. β (1790); Shaw, Gen. Zool. viii. 2, p. 391, pl. 54 (1811); Bechst. Kurze Üebers. p. 65 (1811–12); Kuhl, Consp. Psitt. p. 17 (1820); Voigt, Cuv. Ueb. p. 724 (1831); Neuwied, Beitr. iv. p. 153 (1832); Lear, Parr. pl. 8 (1832); Halm, Orn. Atl., Papag. p. 12, t. 2 (1834); Dubois, Orn. Gal. pl. 36 (1839).

Ara bleu et jaune du Brésil, D'Aubent. Pl. Enl. 36. L'Ara bleu, Buff. Hist. Nat. Ois. vi. p. 191 (1779).

Psittacus cæruleus, Gm. S. N. i. p. 314 (1788). Ara rauna, Levaill. Perr. i. pl. 3 (1801). Macrocercus ararauna, Vieill. N. D. ii. p. 260 (1816); id. Enc. Méth. iii. p. 1417 (1823); Less. Tr. & Orn. p. 185 (1831); Selby, Nat. Libr., Parrots, p. 90, pl. 6 (1836); Schomb. Guian. ii. p. 30 (1848); Cub. in Schomb. Guiun. iii. p. 730 (1848); Burm. Syst. Ueb. ii. p. 157 (1856); Sousa, Mus. Nac. Lisboa, Psittaci, p. 7 (1869); Gulliv. P. Z. S. 1875, p. 489.

Sittace ararauna, Wagl. Mon. Psitt. p. 673 (1832); Finsch, Papag. i. p. 410 (1867), ii. 2, p. 943 (1868); Pelz. Orn. Bras. pp. 255, lii (1871); Sund. Meth. Nat. av. disp. Tent. p. 70 (1872); Gieb. Thes. Orn. iii. p. 494 (1877); Rehnw. Vogelbild. t. ii. f. 1 (1878-

Ara ararauna, G. R. Gr. List Gen. B. p. 51 (1840); Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); G. R. Gr. Gen. B. ii. p. 412, n. 1 (1845); Bp. Naumannia, 1856, Consp. Psitt. no. 8; G. R. Gr. List Psitt. Brit. Mus. p. 26 (1859); Homey. Jown. f. Orn. 1859, p. 360; Cass. Pr. Ac. Phil. 1860, p. 137; Finsch, Nederl. Tijdschr. Dierk, i. Berigt. p. xiv (1863); Tayl. Ibis, 1864, p. 93; Selat. & Salv. 1. Berrgt, p. XIV (1903); Tag. 1905, 1903, p. 30, Scate, S. Sate, P. Z. S. 1867, p. 587 (Mexiana); Salvin, His, 1871, pp. 87, 90; Sclat. & Salv. P. Z. S. 1873, p. 299; iid. Nomencl. Av. Neotrop. p. 111, n. 9 (1873); Garrod, P. Z. S. 1874, p. 587; Sclat. & Salv. P. Z. S. 1879, p. 534 (Bolivia, Burmeister); Tacz. P. Z. S. 1882, p. 46; Sclat. List Vert. An. 8th ed. p. 340 (1883); Salv. Ibis, 1886, p. 67; Tacz. Orn. Per. iii. p. 193, Tabl. p. 98 (1886); Allen, Bull. Am. Mus. Nat. Hist. ii. p. 103 (1889); Garlepp, Journ. f. Orn. 1889, p. 290,

Salvin-Godman Coll.

Salvin-Godman Coll.

Salvin-Godman Coll.

Sclater Coll.

Arara ararauna, Brehm, Mon. d. Papag. t. 7 (1842); Schleg. Mus. P.-B. Psittaci, p. 4 (1864); id. op. cit. Revue, p. 2 (1874).

Macrocercus (Araranna) araranna, Bp. Rev. et Mug. de Zool. 1854,

p. 149, n. 4; Souancé, Rev. et Mag. de Zool. 1856, p. 57. Ararauna ararauna, G. R. Gr. Hand-list, ii. p. 144, n. 8075 (1870). Ara militaris, Salv. & Godm. (nec Linn.) Ibis, 1880, p. 176 (Arihueca).

Sittace cærulea, Rchnw. Journ. f. Orn. 1881, p. 266 (Consp. Psitt. p. 154); id. Vogelbild. Bericht. Taf. ii. f. 1 (1883).

Adult. Upper parts and under tail-coverts blue, in some lights greenish; forehead and vertex olive-green; cheeks naked, lores and upper parts of the cheeks with a few lines of dark green feathers; edge of the cheeks and chin black, the lower feathers of the chin greenish; ear-coverts, sides of the neck, breast, abdomen, and under wing-coverts yellow-orange; quills and tail-feathers blue above, golden olive-yellow below: naked skin of the cheeks, lores, and cere dusky flesh-colour; iris greenish grey or pale yellow; bill black; feet blackish. Total length about 31 inches, wing 14.3, tail about 12, bill 1·6-1·3, tarsus 1·1.

Female. Like the male.

Hab. Tropical America from Panama to Bolivia and Guiana, and the whole valley of the Amazons.

a. Ad. sk. Chepo, Isthmus of Panama. b. ♀ ad. sk. Arihueca, March (Simons). c, d. Ad. sk. Sarayacu, Ecuador (Buckley). e. Ad. sk. Sarayacu, Ecuador (Buckley). f. Ad. st. British Guiana (Schomburgk). g. Ad. sk. Mexiana, Dec. (Wallace). h. Ad. st. South America.

Royal Geographical Society [P.]. Sclater Coll. Purchased. i. Skeleton (without skull).

k. Skeleton.

l. Skull.

### 2. Ara caninde.

Canindé, Azara, Apunt. Hist. Nat. Paraguay, i. p. 400 (1802); id. Voy. (Sonn. ed.) iii. p. 52 (1809).

Macrocercus ararauna, part., Vieill. N. D. ii. p. 260 (1816) (Paraguay); id. Euc. Méth. p. 1417 (partim) (1823); Burm. Syst. Ueb. ii. p. 157 (partim) (1856).

Sittace canindé, Wayl. Mon. Psitt. p. 674 (1832) (ex Azara); Finsch, Papay. i. p. 413 (1867); Gieb. Thes. Orn. iii. p. 494

(1877).

Ara caninde, G. R. Gr. Gen. B. ii. p. 412, n. 2 (1845); Hartl. Syst. Ind. Azar. Apunt. p. 17 (1847); Bp. Naumannia, 1856, Consp. Psitt. (?); G. R. Gr. List Psitt. Brit. Mus. p. 27 (1859); Sclat. & Salv. Nomencl. Av. Neotrop. p. 111, n. 10 (1873); Berl. Journ. f. Orn. 1887, p. 121.

Macrocercus (Ararauna) caninde, Bp. Rev ct Mag. de Zool. 1854,

p. 149, n. 5. Ararauna caninde, G. R. Gr. Haud-list, ii. p. 144, n. 8076 (1870). Sittace azare, Rehnw. Jown. f. Orn. 1881, p. 267 (Consp. Psitt. p. 155); id. Vogelbild. Nachtr. 73 (1883).

Adult. Very much like A. ararauna, but the forehead with no greenish tinge; the naked skin of the cheeks much reduced, and surrounded by a broad green band, which covers the whole of the throat; the feathered lines on the lores and upper part of the cheeks more numerous than in A. ararauna and of a lighter green, like the throat. Total length 32 inches, wing 14·3, tail 19, bill 2·3, tarsus 1·1.

Hab. Paraguay.

a. Ad. sk. b. Ad. sk. [Interior of Brazil.] [River Amazon.]

Warwick Coll. Stevens Coll.

#### 3. Ara macao.

Red and Blue Maccaw, Edw. Birds, iv. p. 158, pl. 158 (1751).

Ara jamaicensis, Briss. Orn. iv. p. 188 (1760).

Psittacus macao, Linn. S. N. i. p. 139, n. 1 (syn. emend.) (1706); Scop. Ann. I. Hist. Nat. p. 26 (1769); Gm. S. N. i. p. 312, n. 1 (syn. emend.) (1788); Lath. Ind. Orn. i. p. 82, n 1 (syn. emend.) (1790); Shaw, Gen. Zool. viii. 2, p. 38; pl. 53 (1811). Ara rouge, D'Aubent. Pl. Enl. n. 12; Buff. Hist. Nat. Ois. vi.

p. 179 (partim) (1779).

Red and Yellow Maccaw, Lath. Syn. i. p. 201, n. 2 (1781); id. Gen.

Hist. ii. p. 107, pl. xxi. (var.) (1822).

\*\*Tistracus aracanga, \*Gm. 8. N. i. p. 313, n. 52 (syn. emend.) (1788); \*\*Lath. Ind. Orn. i. p. 83, n. 2 (syn. emend.) (1790); \*\*Bechst. Lath. Ucb. p. 64 (1811-12); \*\*Kuhl, Consp. Tsitt. p. 16 (1820); \*\*Hahn, Vög. aus As. Lief. xiii. t. 1 (1822); \*\*Licht. Preis-Verz. Mexico, p. 1 (1830); \*\*Voigt, Cur. Ucbers. p. 724 (1831); \*\*Verwied. Beitr. ir. p. 138 (1832); \*\*Light. Orn. Att. Pergua, p. 11 + 1 (1821). iv. p. 138 (1832); Hahn, Orn. Atl., Papag. p. 11, t. 1 (1834); Brehm, Mon. d. Papag. t. 2 (1842); Licht. Journ. f. Orn. 1863, p. 54.

Ara canga, Levaill. Perr. i. pls. 2, 2 bis (1801).

Macrocercus aracanga, Vieill. N. D. ii. p. 258 (part.) (1816); id. Enc. Méth. iii. p. 1416 (1823); Less. Tr. d'Orn. p. 185 (1831); Lear, Parr. pl. 7 (1832); Selby, Nat. Libr., Parrots, p. 93, pl. 7 (1836); Bp. Naumannia, 1856, Consp. Psitt. no. 7; Burm. Syst. Ueb. ii. p. 157 (note) (1856); Cub. in Schomb. Reis. Brit. Guian. iii. p. 729, n. 287 (1848); Gulliv. P. Z. S. 1875, p. 490. Macrocercus macao, Vieill. N. D. ii. p. 262 (1816); id. Euc. Méth.

iii. p. 1418 (1823); Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xiii

(1863).

Red, Yellow and Blue Maccaw, Lath. Gen. Hist. ii. p. 104 (1822). Arara aracanga, Spix, Av. Bras. i. p. 27 (1824); Licht. Nomencl. Av. p. 73 (1854).

Sittace aracanga, Wagl. Mon. Psitt. p. 673 (1832).

Ara macao, Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); G. R. Gr. List Psitt. Brit. Mus. p. 26 (1859); Tayl. Ibis, 1860, p. 119 (Honduras); Cass. Pr. Ac. Phil. 1860, p. 137; Lawr. Ann. Lyc. N. Y. vii. p. 474 (1862); Ibis, 1865, p. 224 (?); Owen, Ibis, 1866, pp. 1693, 170 (with figures of lower jaw); Sclat. § Salv. P. Z. S. 1866, p. 197, 1867, p. 587 (Mexiana), p. 753; G. R. Gray, Hand-list, ii. p. 144, n. 8073 (1870); Salv. Ibis, 1871, pp. 87, 89; Reinh. Ibis, 1871, p. 362; Sclat. § Salv. P. Z. S. 1873, p. 299; iid. Nomenel. Ar. Neotrop. p. 111, n. 6 (1873); Gurrod, P. Z. S. 1873, pp. 465, 633,

4. ARA.

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1874, p. 587; Lawr. Bull. U. S. Nat. Mus. no. 4, p. 35 (Tehuantepec) (1875); Boucard, P. Z. S. 1878, pp. 38, 46; Sclat. & Salv. P. Z. S. 1879, p. 634; Schmidt, P. Z. S. 1880, p. 310; Tacz. P. Z. S. 1882, p. 46; Nutting, Pr. U. S. Nat. Mus. v. p. 402 (1882); Sclat. List Vert. An. 8th ed. p. 339 (1883); Nutting, Pr. U. S. Nat. Mus. vii. pp. 376, 388, 395, 407 (Nicaragua) (1883); Zeled. Pr. U. S. Nat. Mus. viii. p. 111 (Costa Rica) (1885); Salv. Ibis, 1886, p. 67; Tacz. Orn. du Pérou, iii. p. 192, Tabl. p. 98 (1886); Ridgw. Man. N. Am. Birds, p. 587 (1887); Garlepp, Journ. f. Orn. 1880, p. 200. Payloyak Layur, 6 
1889, p. 290; Berlepsch, Journ. f. Orn. 1889, p. 313.

Ara aracanga, G. R. Gr. Gen. B. ii. p. 412, n. 3 (1845); Sclat. P. Z. S. 1857, p. 266; Moore, P. Z. S. 1859, p. 59; Sclat. § Salv. Ibis, 1859, p. 137; Homey, Journ. f. Orn. 1859, p. 360; Sclat. § Salv. P. Z. S. 1861, p. 367; Larg. Ava. Ibis. Salv. P. Z. S. 1864, p. 367; Lawr. Ann. Lyc. N. Y. viii. p. 11

(1867).

Macrocercus (Aracanga) aracanga, Bp. Rev. et Mag. de Zool. 1854,

p. 149, n. 6; Souancé, Rev. et May. de Zool. 1856, p. 57.
Sittace macao, Sand. Journ. f. Orn. 1855, p. 165; Finsch, Papag.
i. p. 398 (1867), ii. p. 943 (1868); Lawr. Ann. Lyc. N. Y. ix.,
p. 131 (1868); Frantz. Journ. f. Orn. 1869, p. 364; Pelz. Orn.
Bras. pp. 254, lii (1871); Sund. Meth. Nat. av. disp. Tent. p. 704 (1872); Gieb. Thes. Orn. iii. p. 495 (1877); Rehnw. Vogelbild. t. ix. f. 5 (1878–83); Sund. Ibis, 1886, p. 454

Arara macao, Schley. Mus. P.-B. Psittaci, p. 3 (1864); id. op. cit.

Revue, p. 2 (1874).

Sittace coccinea, Rehnw. Journ. f. Orn. 1881, p. 267 (Consp. Psitt. p. 155).

Adult. Scarlet-red; lower back, rump, upper and under tailcoverts pale blue; smaller upper wing-coverts and under wingeoverts searlet; greater and median upper wing-eoverts and seapulars yellow, tipped with green; quills blue, underneath golden red; greater under wing-coverts brown-red; tail-feathers scarletred, with black shafts, the two central ones scarcely tipped with blue, the blue tips increasing in extent on the outer feathers; the three outer tail-feathers almost wholly blue; tail underneath golden red, which becomes very dark on the three outer feathers: upper mandible white, blackish at the tip and at the base of the edges; under mandible black; feet blackish; iris yellowish white; naked skin of the cheeks dusky flesh-eolour. Total length about 36 inches, wing 16, tail 23.5, bill 2.7, tarsus 1.1.

Female. Like the male.

Young. The anterior median upper wing-coverts and the posterior scapulars partly green (Finsch).

Hab. America from Tehuantepec (Mexico), through Central America to Bolivia, Guiana, and the Amazons Valley.

a. d ad. sk.	Chimalapa, Mexico, Feb. (Richardson).	Salvin-Godman Coll.
b. Ad. sk.	Aguna, Gnatemala, Jan.	Salvin-Godman Coll.
c, d. Ad. sk. e. ♂ ad. sk.	Savana Grande, Dec. (O. S.). Peje, Costa Rica (J. Carmiol).	Salvin-Godman Coll. Salvin-Godman Coll.
f_ Q ad, sk.	Panama (McLeannan).	Salvin-Godman Coll.

g, h. Ad. sk. i. Ad. sk. k. Ad. sk. l. Skeleton. m, n, o. Skeletons. Sarayacu, Ecuador (Buckley). Demerara (Wilkins).

S. America. Guiana.

Salvin-Godman Coll. Sclater Coll.

Sir E. Belcher [P.].

## 4. Ara chloroptera.

Arara-canga, Marcgr. Hist. Bras. i. p. 206 (1648); Licht. Abh. d. Berl. Ak. 1815–16, p. 167.

Ara brasiliensis, Briss. Orn. iv. p. 184, pl. xix. f. 1 (1760); id. Suppl. vi. p. 179.

Red and Blue Maccaw, Lath. Syn. i. p. 199 (1781); id. Gen. Hist. ii. p. 102 (syn. fals.) (1822).

L'Ara Macao, Levaill. Perr. pl. 1 (1801).

Guacamayo roxo, Azaru, Apunt. Hist. Nat. Parag. i. p. 392, n. 271 (1802).

Guacamayo macao, Azara, Voy. (Sonn. ed.) iv. p. 50 (1809).

Chiacamayo macao, Azara, Voy. (Solin, ed.) N. p. 50 (1805).

Psittacus macao, Bechst. (nec Linn.) Lath. Ueb. p. 724 (1811–12);

Kuhl, Consp. Psitt. p. 15 (1820); Neuwied, Reise, i. pp. 99, 131, 206, 250, ii. pp. 230, 237, 240 (1820); id. Beitr.iv. p. 138 (1832);

Voigt, Cuv. Ueb. p. 724 (1831); Hahn, Orn. Atl., Papag. p. 21, t. 12 (1834); Selby, Nat. Libr., Parr. p. 93 (1836); Dubois, Orn. Gal. pl. 91 (1839); Brehm, Mon. d. Papag. t. 1 (1842); Thienem. Fortpflanz. d. ges. Vög. p. 75, t. xiv. f. 7 (egg) (1846).

Arara macao, Spix, Av. Bras. ii. p. 27 (1824).

Macrocercus macao, Less. Tr. d'Orn. p. 185 (1831); Bp. Consp. Av. i. p. 1 (1850); id. Naumannia, 1856, Consp. Psitt. no. 6; Schomb. Reis. Guian, iii. p. 730 (1848); Burm. Syst. Ueb. ii. p. 155 (1856); Sousa, Mus. Nac. Lisboa, Psittaci, p. 8 (1869); Burm. P. Z. S. 1878, p. 77.

Sittace macao, Wagl. Mon. Psitt. p. 671 (1832).

Ara macao, G. R. Gr. (nec Linn.) Gen. B. ii. p. 412, n. 4 (1845); Hartl, Ind. Azar. Apunt. p. 17 (1847); Homey. Journ. f. Orn. 1859, p. 360; Gulliv. P. Z. S. 1875, p. 489.

Macrocercus (Aracanga) macao, Bp. Rev. et May. de Zool. 1854, p. 149, n. 7; Souancé, Rev. et May. de Zool. 1856, p. 57.

Ara chloropterus, G. R. Gr. List Psitt. Brit. Mus. p. 26 (1859); id.

Hand-list, ii. p. 144, n. 8074 (1870).

Ara chloroptera, Sclat. P. Z. S. 1859, p. 433; Sclat. & Salv. P. Z. S. 1864, p. 367 (Panama); Salvin, Ibis, 1871, p. 90; Selat. & Salv. Nomencl. Av. Neotrop. p. 111, n. 7 (1873); Garrod, P. Z. S. 1873, p. 633, 1875, p. 343; Sclat. & Salv. P. Z. S. 1879, p. 634; Schmidt, P. Z. S. 1880, p. 310; Salv. & Godm. Ibis, 1880, p. 176; Schat. List Vert. An. 8th ed. p. 339 (1883); Salv. Ibis, 1886, p. 66; Berl. Journ. f. Orn. 1887, p. 121; Garlepp, Journ. f. Orn. 1889, p. 290.

Macrocercus chloropterus, Finsch, Ned. Tijdschr. Dierk. i. Berigt.

p. ix (1863).

Arara chloroptera, Schleg. Mus. P.-B. Psittaci, p. 3 (1864); ud. op.

cit. Revue, p. 2 (1874).

Sittace chloroptera, Finsch, Papug. i. p. 403 (1867); Pelz. Orn. Bras. pp. 255, lii (1871); Gieb. Thes. Orn. iii. p. 494 (1877); Rehuw. Vogelbild. t. ix. f. 4 (1878–83); id. Journ. f. Orn. 1881, p. 267 (Consp. Psitt. p. 155).

Adult male. Dark scarlet; lower back, rump, upper and under tail-coverts pale blue; quills blue, underneath golden red; smaller 4. ARA. 157

upper wing-coverts dark scarlet, median olive-green, greater blue; the innermost greater upper wing-coverts and the scapulars olive-green, more or less tinged with blue; two central tail-feathers dark red, tipped with blue, the next two pairs blue, broadly edged with red on both webs towards the base; the three outer tail-feathers of each side nearly entirely blue; tail underneath golden red; naked skin of the sides of the head flesh-colour, with many lines of red feathers: iris straw-yellow; upper mandible horny white, with the base of the edges black; lower mandible black; feet greyish black. Total length about 34 inches, wing 15·5, tail 21, bill 3·3, tarsus 1·2.

Female. Like the male.

Hab. From Guatemala to Guiana and Bolivia, and the Amazons Valley.

a. Ad. sk.	S. America.	Purchased. (Type of the species.)
b. Ad. sk.		Riocour Coll.
c. Ad. sk.	Panama (McLeannan).	Sclater Coll.
$d. \ \ 2$ ad. sk.	Panama (McLeannan).	Salvin-Godman Coll.
e. o ad. sk.	Valle Dupar, Venezuela, May (Simons).	Salvin-Godman Coll.
f. ♀ ad. sk.	Bartica Grove, Brit. Guiana, Oct. (Whitely).	Salvin-Godman Coll.
g. ♂ ad. sk.	Camacusa, Brit. Guiana, April (Whitely).	Salvin-Godman Coll.
h, i. Ad. sk. k. Skeleton incomplete.	Sarayacu, Écuador (Buckley).	Salvin-Godman Coll.
l. Skull.		

#### 5. Ara tricolor.

Le petit Ara, D'Aubent. Pl. Enl. 641.

Ara rouge, part., Buff. Hist. Nat. Ois. vi. p. 179 (1779).

Psittacus macao, *Bodd.* (nec Linn.) Tabl. Pl. Enl. p. 39 (ex Pl. Enl. 641) (1783).

L'Ara tricolor, Levaill. Perr. i. p. 17, pl. 5 (1801).

Psittacus tricolor, Bechst. Kurze Ueb. p. 64, pl. i. (1811); Kuhl, Consp. Psitt. p. 16 (1820); Voigt, Cuv. Uebers. p. 724 (1831);

Brehm, Mon. d. Papag. t. 3 (1842).

Macrocereus tricolor, Vieill. N. D. ii. p. 262 (1816); id. Enc. Méth. iii. p. 1418 (1823); Less. Tr. d'Orn. p. 186, pl. 18. f. 1 (1831); Cab. u. Gundl. Journ. f. Orn. 1856, p. 105; Brewer, Pr. Bost. Soc. Nat. Hist. vii. p. 307 (1860); Gundl. Journ. f. Orn. 1861, p. 336; id. Repert. Fisico-Nat. Cuba, i. p. 297 (1866); id. Journ. f. Orn. 1871, p. 277, 1874, p. 163; id. Contr. Orn. Cuba, pp. 126, 276 (1876).

Sittace tricolor, Wagl. Mon. Psitt. p. 669 (1832); Finsch, Papag.
i. p. 409 (1867); Rehnw. Journ. f. Orn. 1881, p. 268 (Consp. Psitt.
p. 156); id. Vogelbild. Nachtr. 74 (1883); Marsh. Papag. p. 55

(1889).

Macroeireus tricolor, Sw. Class. B. ii. p. 299 (1837).

Ara tricolor, D'Orb. in La Sagra's Hist. Nat. Cuba, Ois. p. 161 (1840); G. R. Gr. Gen. B. ii. p. 412, n. 5 (1845); Gosse, B. of Jan. p. 260 (1847); Albrecht, Journ. f. Orn. 1862, p. 202; Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xiv (1863); Sclat. & Salv. Nomencl. Av. Neotrop. p. 111, n. 8 (1873); A. & E. Newt.

Handb. Jamaica, p. 110 (1881); Cory, List B. W. Ind. p. 20 (1885); id. Auk, 1886, p. 454; id. Birds of the W. Ind. p. 177 (1889).

Macrocercus (Aracanga) tricolor, Lemb. Aves Cuba, p. 132 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 149, n. 8; Souance, Rev. et Mag.

de Zool. 1856, p. 57.

Arara tricolor, Bp. Naumannia, 1856, Consp. Psitt. no. 5; Schley. Mus. P.-B. Psittaci, p. 4 (1864); id. op. cit. Revne, p. 2 (1874). (Sittace?) lichtensteini, Wayl. (!) fide Bp. Naumannia, l. c. Primolius tricolor, G. R. Gr. Hand-list, ii. p. 145, n. 8083 (1870).

Male. Forehead red, becoming yellowish red on the top of the head, and shading into bright yellow on the nape; feathers of the upper back cinnamon-red, edged with greenish; lesser wing-coverts brown with reddish edgings; entire underparts scarlet-red, showing a tinge of orange on the checks and throat, some of the feathers showing yellow on the belly; primaries and secondaries showing bright blue on the upper surface; under surface of primaries pale brownish red; upper surface of tail-feathers showing the feathers cinnamon-red, shading into bright blue on the tips, some feathers showing more blue than cinnamon, while in others the cinnamon predominates; under surface of tail-feathers golden orange-red; crissum pale blue; bare skin around the eye probably dull white: bill dark brown, pale at the tip; legs and feet brownish; iris pale yellow. Length about 18 inches, wing 11, tail 10, bill 1.7, tarsus 0.85.

Hab. Cuba.

a. Ad. sk.b. Ad. st.

[South America.] |South America.]

Purchased. Zool. Society.

#### 6. Ara militaris.

The Great Green Maccaw, Edw. Glean. vii. p. 224, pl. 313 (1764). Psittaeus militaris, Linn. S. N. i. p. 139, n. 2 (1766); Gm. S. N. i. p. 313, n. 2 (1788); Lath. Ind. Orn. p. 83, n. 3 (1790); Shaw, Gen. Zool. viii. 2, p. 395 (1811); Bechst. Kurze Ueb. p. 65, n. 4 (1811); Kuhl, Consp. Psitt. p. 17, n. 7 (1820); Licht. Preis-Verz. Mexico, p. 1 (1830); Wagl. Isis, 1831, p. 525; Voigt, Cuv. Uebers. p. 124 (1831); Hahn, Orn. Allas, Papag. p. 26, t. 11 (1834); Brehm, Mon. de Papag. t. 5 (1842); Licht. Journ. f. Orn. 1863, p. 54.

Military Maccaw, Lath. Syn. i. p. 203, n. 3 (1781); id. Gen. Hist.

ii. p. 106 (1822).

L'Ara militaire, Levaill. Perr. pl. 4 (1801).

Macrocercus militaris, Vieill. N. D. ii. p. 261 (1816); id. Enc. Méth. iii. p. 1418 (1823); Steph. Gen. Zool. xiv. p. 113 (1826); Less. Tr. d'Orn. p. 185 (1831); Selb. Nat. Libr., Parrots, p. 87, pl. 5 (part.) (1836); Bp. P. Z. S. 1837, p. 109 (Mexico); Burm. Syst. Ueb. ii. p. 163 (note, part.) (1856); Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xiv (1863); Sousa, Mus. Nac. Lisb. Psittaci, p. 7 (1869).

Sittace militaris, Wagl. Mon. Psitt. p. 668 (part.) (1832); Hartl.
Syst. Verz. Ges. Mus. p. 86 (1844); Finsch, Papag. i. p. 396 (part.) (1867), ii. p. 943 (1868); id. Abh. nat. Ver. Brem. 1870, p. 352; Laur. Mem. Bost. Soc. N. H. ii. p. 295 (1874); Gieb.

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Thes. Orn. iii. p. 496 (part.) (1877); Rehnw. Vogelbild. t. 1. f. 1 (1878-83); id. Journ. f. Orn. 1881, p. 268 (Consp. Psitt. p. 156)

(part.).

Ara militaris, G. R. Gr. Gen. B. ii. p. 412, n. 6 (1845); ? Gosse, B. of Jamaica, p. 261 (1847); Hartl. Journ. f. Orn. 1857, p. 42; Sclat. P. Z. S. 1857, p. 230, ? 1858, p. 76 (Rio Napo); G. R. Gr. List Psitt. Brit. Mus. p. 28 (part.) (1859); Sclat. Cat. Am. Birds, p. 345, n. 2058 (1862); ? Albr. Journ. f. Orn. 1862, p. 202; Sclat. P. Z. S. 1867, p. 183; Salv. Ibis, 1871, pp. 87, 88 (part.); Sclat. § Salv. Nomencl. Av. Neotrop. p. 111, n. 5 (part.) (1873); ? Tacz. P. Z. S. 1874, p. 549; Lawr. Bull. U. S. Nat. Mus. no. 4, p. 35 (Tehuantepec) (1875); Garrod, P. Z. S. 1876, p. 692; P. Boucard, Ann. Soc. Linn. Lyon, 1878, p. 32 (Guatemal); Tacz. P. Z. S. 1879, pp. 241; Sclat. § Salv. P. Z. S. 1879, pp. 538 (?), 634; Sclat. List Vert. An. 8th ed. p. 339 (1883); Nutt. Pr. U. S. Nat. Mus. vii. p. 407 (Nicaragua) (1883); Zeled. Pr. U. S. Nat. Mus. viii. p. 111 (Costa Rica) (1885); Tacz. Orn. Pér. iii, p. 191, Tabl. p. 98 (1886); Ridgw. Man. N. Am. Birds, p. 586 (1887); Bignon, Bull. Soc. Zool. Fr. 1888, p. 181; Salv. § Godm. Ibis, 1889, p. 241.

Macrocercus (Aracanga) militaris, Bp. Rev. et Mag. de Zool. 1854,

p. 149, n. 9.

Arara militaris, Schleg. Mus. P.-B. Psittaci, p. 5 (part.) (1864); id. op. cit. Revue, p. 2 (1874).

Primolius militaris, G. R. Gr. Hand-list, ii. p. 144, n. 8081 (1870). Sittace militaris, subsp. ambigua, Rchnw. (nec Bechst.), Journ. f. Orn. 1881, p. 268 (Consp. Psitt. p. 156).

Adult male. Green, with an olive tinge, head purer green; a slight tinge of bluish on the hind neck; forehead and feathered lines on the lores scarlet; feathered lines on the cheeks blackish green; chin brown; lower back, rump, and upper tail-coverts light blue; quills, primary-coverts, and outermost greater wing-coverts blue; quills underneath golden olive; under wing-coverts green, the greater ones somewhat dusky; four middle tail-feathers brown-red, largely tipped with blue; third and fourth blue, edged with brown-red towards the base, the two outer tail-feathers almost entirely blue; tail underneath golden olive-yellow: "naked skin of the cheeks flesh-colour; iris yellow-grey" (Finsch); bill blackish; feet greyish black. Total length 27 inches, wing 14·5, tail 14, bill 2·2, tarsus 1·1.

Female. Like the male.

Hab. Mexico, Central and South America from Bogota to Peru and Bolivia.

a. Ad. sk.	S. America.	Dr. J. E. Gray [P.].
b, c. Ad. sk.	S. America.	Purchased.
b, c. Ad. sk. d. of ad. sk.	Quiriogo, Sonora, Mexico, May (Lloyd).	Salvin-Godman Coll.
e,f. ♂♀ ad. sk.	Presidio de Mazatlan, Mexico, Dec. (Forrer).	Salvin-Godman Coll.
g– $i$ . ♂♀ ad. sk.	San Blas, Mexico, May (Richardson).	Salvin-Godman Coll.
k. Ad. sk.	Culata, Colima, Mexico	Salvin-Godman Coll.

Tamaulipas

l. ♂ ad. sk.

Sierra Madre. (Richardson). Mexico.

Salvin-Godman Coll.

m. 9 ad. sk. n. Ad. sk. o. Skeleton. p. Skeleton.

Bogota.

Salvin-Godman Coll. Sclater Coll.

Zool. Society.

# 7. Ara ambigua.

Le Grand Ara militaire, Levaill. Perr. pl. 6 (1801); Vieill. N. D.

ii. p. 261 (1816).

Psittacus ambiguus, Bechst. Kurze Ueb. p. 65, n. 5 (1811); Kuhl, Consp. Psitt. p. 17, n. 7 (1820); Hahn, Orn. Atl., Papag. p. 25, t. 9 (1834).

Macrocercus ambiguus, Steph. Gen. Zool. xiv. p. 113 (1826).

Macrocercus militaris, Selb. Nat. Libr., Parr. p. 86, pl. 5 (part.)

(1836); Burm. Syst. Ueb. ii. p. 163 (note, part.) (1856).

Sittace militaris, part., Wagl. Mon. Psitt. p. 668 (1832); Finsch, Papag. i. p. 396 (part.) (1867); ? Lawr. Am. Lyc. N. Y. ix. p. 131 (Costa Rica) (1868); ? Frantz. Journ. f. Orn. 1869, p. 364 (Costa Rica).

Arara buffoni, Brehm, Mon. d. Papag. p. 6, t. 8 (1842) (ex Levaill.

pl. 6).

Ara militaris (part.), G. R. Gr. List Psitt. Brit. Mus. p. 28, specim. d ra initiaris (part.), G. R. Gr. List rstat. Brd. Miss. p. 28, specific. (1859); Cass. Pr. Ac. Philad. 1860, p. 137 (Nercua River); Lawr. (nec Linn.) Ann. Lyc. N. Y. vii. p. 299 (Panama) (1862); Salv. (nec Linn.) P. Z. S. 1870, p. 213 (Calovevora); id. Ibis, 1871, pp. 87, 88 (part.); Sclat. & Salv. Nomencl. Av. Neotrop. p. 111, n. 5 (part.) (1873); ? Boucard, P. Z. S. 1878, p. 46 (Costa Rica); ? Sclat. & Salv. P. Z. S. 1879, p. 538 (Antioquia).

Ara militaris s. ambiguus, Cab. Journ. f. Orn. 1862, p. 335 (Costa

Rica).

Macrocercus (Aracanga) ambiguus, Bp. Rev. et Mag. de Zool. 1854, p. 149, n. 10; ? Souancé, Rev. et Mag. de Zool. 1856, p. 57. Arara militaris, Schleg. Mus. P.-B. Psittaci, p. 5 (part.) (1864).

Ara ambigua, Sclat. P. Z. S. 1867, p. 183; Garrod, ibid. p. 587. Sittace ambigua, Finsch, Papag. ii. 2, p. 943 (1868). Primolius ambiguus, G. R. Gr. Hand-list, ii. p. 144, n. 8080 (1870).

Very similar to A. militaris, from which it differs in being larger, with a much more powerful bill, and in having the olivegreen colour much yellower, and the blue colour of the lower back, rump, upper and under tail-coverts paler. Total length 31 inches, wing 16, tail 18, bill 2.8 to 2.7, tarsus 1.1.

Hab. Western coast of America, from Veragua to Ecuador.

I have not the least doubt as to A. ambiqua being a different bird from A. militaris. Mr. Sclater, who rightly (P. Z. S. 1867, p. 183) insisted on the two birds being different, was wrong in thinking that the larger one was from Mexico.

a. ♂ ad. sk. b. Ad. sk.

Calovevora, Veragua (E. Arcć). Balzar Mountains, Ecuador March (Illingworth).

Salvin-Godman Coll. Salvin-Godman Coll.

c. Ad. sk.

Guayaquil, Ecuador.

G. Barclay [P.].

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### 8. Ara rubrigena.

Ara rubro-genis, Lafresn. Rev. Zool. 1847, p. 65; O. Des Murs, Icon. Orn. pl. 72 (1848); id. in Casteln. Expéd. Am. du Sud, Ois. p. 12 (1855).

Ara rubrogenys, G. R. Gr. Gen. B. iii. App. p. 19 (1849); Hartl.

Journ. f. Orn. 1857, p. 42.

Macrocercus (Aracanga) rubrigenys, Bp. Rev. et Mag. de Zool. 1854, p. 149, n. 11; Sovancé, Rev. et Mag. de Zool. 1856, p. 57.

Sittace rubrigénis, Bp. Naumannia, 1856, Consp. Psitt. no. 14; Sonancé, Iconogr. Perr. pl. 3 (1857).

Ara rubrigenys, Gr. R. Gr. List Psitt. Brit. Mus. p. 29 (1859).

Arara rubrigena, Schleg. Mus. P.-B. Psittaci, p. 5 (1864); id. op. cit. Revue, p. 2 (1874). Sittace lafresnayei, Finsch, Papag. i. p. 394 (1867); Gieb. Thes.

Orn. iii. p. 495 (1877).

Primolius rubrigenys, G. R. Gr. Hand-list, ii. p. 145, n. 8084 (1870).

Ara rubrigenis, Sclat. & Salv. Nomencl. Av. Neotropr. p. 111, n. 4 (1873); iid. P. Z. S. 1879, p. 634.

Sittace lafresnavi, Rchnw. Journ. f. Orn. 1881, p. 269 (Consp. Psitt. p. 157); id. Vogelbild. Nachtr. 75 (1883).

Adult. Olive-green, head and neck purer green; forehead, crown, a spot behind the ears, smaller upper wing-coverts, bend of the wing, carpal edge, under wing-coverts, axillaries, and thighs orange-red; feathered lines on the naked lores and cheeks blackish brown; quills, primary-coverts, and bastard wing greyish blue; secondaries tinged with green on the outer web; greater under wing-coverts olive-yellow; tail green, bluish towards the tip, quills and tail-feathers underneath golden olive, dusky towards the tip: bill and feet blackish. Total length about 24 inches, wing 12.3 to 11.8, tail 14, bill 1.95 to 1.90, tarsus 0.9.

Young. Differs from the adult in having much less red colour on the crown and ear-coverts, and no red at all on the smaller wingcoverts, bend of the wing, and carpal edge; the under wing-coverts are of a paler orange, and the thighs greenish, tinged with orange.

Hab. Bolivia.

a, b. Ad. st. c. Imm. sk.

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C. Bridges [C.]. Massena Coll.

#### 9. Ara severa.

Maracana, Marcgr. Hist. Bras. ix. p. 207 (1648). Brasilian Green Maccaw, Edw. Glean. v. p. 41, pl. 229 (1758). Ara brasiliensis viridis, Briss. Orn. iv. p. 198 (1760).

Ara brasiliensis erythrochlora, Briss. Orn. iv. p. 202 (1760).
Psittacus severus, Linn. S. N. i. p. 140, n. 6 (1766); Scop. Ann. I.
Hist. Nat. p. 27 (1769); Gm. S. N. i. p. 315, n. 6, with var. β
(1788); Lath. Ind. Orn. i. p. 85, n. 10 (1790); Shaw, Gen. Zool. viii. 2, p. 397 (1811); Bechst. Kurze Uebers. p. 66, n. 10 (1811); Kuhl, Consp. Psitt. p. 18 (1820); Voigt, Cuv. Uebers. p. 725 (1831); Neuwied, Reise Bras. i. p. 322, ii. pp. 147, 341 (1820); id. Beitr. iv. p. 155 (1832); Hahn, Orn. Atl., Papag. p. 72, t. 53 (1836).

L'Ara verd du Brésil, D'Aubent, Pl. Enl. 383.

L'Ara vert, Buff. Hist. Nat. Ois. vi. p. 194 (1779).

Brasilian Green Maccaw, Lath. Syn. i. p. 208, n. 9 (1781); id. Suppl. i. p. 58 (1787); id. Gen. Hist. ii. p. 112 (1822).

L'Ara Maracana, *Levaill. Perr.* pl. 8, pl. 10 (var.) (1801). Macrocercus severus, *Vieill. N. D.* ii. p. 263 (1816); *id. Enc. Méth.* iii. p. 1419 (1823); Steph. Gen. Zool. xiv. p. 113 (1826); Less. Tr. d'Orn. p. 186 (1831); Burm. Syst. Ueb. ii. p. 160 (1856); Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xiv (1863); Gulliv. P. Z. S. 1875, p. 489.

Arara severus, Spix, Av. Bras. i. p. 28 (1824); Brehm, Mon. d.

Papag. t. 11 (with var.) (1842).

Sittace severa, Wagl. Mon. Psitt. p. 666 (1832); Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 15; Souancé, Rev. et Mag. de Zool. 1856, p. 57; Bp. Naumannia, 1856, Consp. Psitt. n. 10; Finsch, Papag. i. p. 417 (1867), ii. p. 944 (1868); Sousa, Mus. Nac. Lisboa, Psittaci, p. 8 (1869); Pelz. Orn. Bras, pp. 255, lii (1871); Gieb. Thes. Orn. iii. p. 497 (1877); Rehnw. Vogelbid. t. ix. f. 3 (1878-83); id. Journ. f. Orn. 1881, p. 268 (Consp. Psitt. p. 156).

Ara severa, G. R. Gr. Gen. B. ii. p. 412, n. 8 (1845); Sclat. P. Z. S. 1855, p. 162, 1857, p. 266; G. R. Gr. List Psitt. Brit. Mus. p. 28 (1859); Homey, Journ. f. Orn. 1859, p. 360; Cass. Pr. Ac. Phil. 1860, p. 91; Sclat. Cat. Am. B. p. 345, n. 2059 (1862); Lawr. Ann. Lyc. N. Y. vii. p. 474 (1862); Sclat. & Salv. P. Z. S. 1866, p. 197, 1867, p. 979; Salv. Ibis, 1871, pp. 87, 91; Sclat. & Salv. D. Z. S. 1871, pp. 87, 91; Sclat. & Salv. D. Z. S. 1872, pp. 111, p. 11 P. Z. S. 1873, p. 299; iid. Nomencl. Av. Neotrop. p. 111, n. 11 (1873); iid. P. Z. S. 1879, pp. 538, 634; Salv. Cat. B. Strickl. Coll. p. 464 (1882); Sclat. P. Z. S. 1884, pp. 604, 615; Berl. & Tacz. P. Z. S. 1883, p. 573; Salv. Ibis, 1886, p. 66; Tacz. Orn. Pér. iii. p. 194, Table, p. 99 (1886); Allen, Bull. Am. Mus. Nat. Hist. ii. p. 104 (1889); Garlepp, Journ. f. Orn. 1889, p. 290; Berlepsch, Journ. f. Orn. 1889, p. 313.

Ara castaneifrons, Lafr. Rev. de Zool. 1847, p. 66. Conurus severus, Cab. in Schomb. Guian. iii. p. 729 (1848).

Macrocercus (Aracanga) castaneifrons, Bp. Rev. et Mag. de Zool. 1854, p. 149, n. 12.

Arara severa, Schleg. Mus. P.-B. Psittaci, p. 6 (1864); id. op. cit. Revue, p. 2 (1874).

Primolius severus, G. R. Gr. Hand-list, ii. p. 145, n. 8082 (1870).

Adult male. Green, head washed with blue; forehead, margin of the cheeks, and chin chestnut-brown; feathered lines on the cheeks black; quills and primary-coverts blue; quills edged with black at the tip; secondaries edged with green on the outer webs; the tertials entirely green; carpal edge and outermost smaller under wing-coverts red, the remainder green; greater under wingcoverts dull olive; tail-feathers above reddish brown, edged with green towards the base and tipped with blue; quills and tailfeathers underneath dark golden red: naked skin of the sides of the head whitish flesh-colour; iris yellow; bill and feet black. Total length about 20 inches, wing 9.8, tail 10, bill 1.6, tarsus 0.8.

Female. Like the male.

Hab. Brazil, the Amazons Valley to Bolivia, Guiana, Colombia, and Panama.

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a. Ad. sk. Bogota (Crowther). Salvin-Godmam Coll. b. Ad. sk. Bogota. Sclater Coll. c, d. Ad. sk. Sarayacu, Ecuador (Buck-Salvin-Godman Coll. ley). e. 3 ad. sk. Pebas, E. Peru, Aug. Salvin-Godman Coll. (Hau.vwell). f. Ad. sk. (red var.). Rio Javari. Purchased. g. Ad. st. Bolivia. C. Bridges [C.]. h. Ad. sk. Bolivia. Sclater Coll. i. Ad. sk. [Bolivia.] E. Wilson, Esq. [P.]. k. Ad. sk. Purchased. S. America. l. Ad. sk. Ucayali, Aug. G. Garlepp [C.].

### Ara maracana.

Maracana afeytado, Azara, Apunt. Hist. Nat. Parag. i. p. 405, n. 274 (1802).

Maracana fardé, Azara, Voy. (Sonn. ed.) iii. p. 54 (1809).

Macrocercus maracana, Vieill. N. D. ii. p. 260 (1816); id. Enc. Méth. iii. p. 1417 (1823).

Psittacus illigeri, Temm. & Kuhl, Consp. Psitt. p. 19 (1820); Neuwied, Beitr. iv. p. 160 (1832); Halm, Orn. Atl., Papag. p. 46, t. 31 (1835). Psittacus fuscatus, Illig. Mus. Berol., fide Kuhl, l. c.

Psittacus macavuanna, Neuw. (nec Gm.) Reis. Bras. i. pp. 52, 91, ii. p. 34 (1820).

Arara purpureo-dorsalis, Spir, Av. Bras. i. p. 26, t. xxiv. (1824); Voigt, Cuv. Uebers. p. 725 (1831); Brehm, Mon. der Papag. t. 9

Macrocercus illigeri, Steph. Gen. Zool. xiv. p. 113 (1826); Less. Tr. d'Orn. p. 186 (1831); Burm. Syst. Ueb. ii. p. 161 (1856); Gulliv. P. Z. S. 1875, p. 489. Sittace illigeri, Wagl. Mon. Psitt. p. 663 (1832); Hartl. Syst. Verz.

Ges. Mus. p. 86 (1844); Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 14; Rehnw. Journ. f. Orn. 1881, p. 269 (Consp. Psitt. p. 157). Psittacus makavuana, Hahn (nec Gm.), Orn. Atl., Papug. p. 87, t. 67 (1837).

Psittacara illigeri, Bourj. Perr. pl. 13 (av. jun.?) (1837–38).

Ara maracana, G. R. Gr. Gen. B. ii. p. 412, n. 10 (1845); Hartl. Ind. Azar. Apunt. p. 17 (1847); G. R. Gr. List Psitt. Brit. Mus. p. 27 (1859); Sclat. Cat. Am. Birds, p. 345, n. 2060 (1862); Sclat. & Salv. Nomencl. Av. Neotrop. p. 111, n. 12 (partim) (1873); Garrod, P. Z. S. 1874, p. 587; Schmidt, P. Z. S. 1880, p. 310; Sclat. List Vert. An. 8th ed. p. 341 (1883); Berl. & Jhering, Zeitschr. f. ges. Orn. 1885, p. 162; Berl. Journ. f. Orn. 1887, p. 121, 1889, p. 314.

Sittace maracana, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 18; Souancé, Rev. et Mag. de Zool. 1856, p. 57; Bp. Naumannia, 1856, Consp. Psitt. no. 11; Finsch, Papag. i. p. 420 (1807), ii. p. 944 (1868); Sousa, Mus. Nac. Lisboa, Psittaci, p. 7 (1869); Pelz. Orn. Bras. pp. 255, lii (1871); Gieb. Thes. Orn. iii. p. 496 (1877); Rehnw. Vogelbild. t. ix. f. 6 (1878-83).

Ara illigeri, Homey. Journ. f. Orn. 1859, p. 361.

Arara maracana, Schleg. Mus. P.-B. Psittaci, p. 6 (1864); id. op. cit. Revue, p. 2 (1874).

Primolius maracana, Bp., fide G. R. Gr. List Psitt. Brit. Mus., in syn. A. maracanæ, p. 27 (1859); G. R. Gr. Hand-list, ii. p. 144, n. 8079 (1870).

Adult. Green, rump and upper tail-coverts with an olive tinge; forehead rose-red; head, nape, and cheeks greenish blue, darker on the crown; a patch on the lower back and another on the middle of the abdomen pale scarlet; quills and primary-coverts blue; secondaries and outermost greater upper wing-coverts blue, tinged with green on the outer webs; carpal edge bluish green; under wing-coverts olive-green; tail blue, with the base of the feathers, especially of the central ones, tinged with reddish brown; quills and tail-feathers underneath golden olive, becoming dusky towards the tips: "bill horny black; feet brown flesh-colour; naked cheeks yellowish flesh-colour; iris brown-red" (Finsch). Total length 16·7 inches, wing 8·5, tail 9·1, bill 1·4, tarsus 0·6.

Female. Like the male, only the red on the forehead less

extended.

Young. Red colour on the forehead less extended and paler; the patches on the lower back and middle of the abdomen yellowish, and the upper parts spotted with pale grey-brown (Wied).

Hab. Brazil and Paraguay.

a. Ad. sk.		Riocour Coll.
b. Ad. sk.	Brazil.	Purchased.
c. Ad. sk.	Brazil.	Gould Coll.
d. Ad. sk.	S. America.	Sclater Coll.
<i>e</i> , <i>f</i> . Ad. sk.	Bahia, Brazil (Wucherer).	Salvin-Godman Coll.
g. 3 ad. sk.	Pelotas, Rio Grande do Sul,	Salvin-Godman Coll.
	Brazil ( $Joyner$ ).	

#### 11. Ara couloni.

Conurus illigeri, Tsch. (nec Temm.) Cab. Wiegm. Archiv, 1844, p. 304; id. Fauna Per., Aves, p. 271 (1844-46); Cab. Journ. f. Orn. 1869, p. 287.

Sittace maracana (part.), Finsch, Papag. i. p. 420 (1867).

Ara couloni, Sclat. P. Z. S. 1876, p. 255 (with figure of the head); Gieb. Thes. Orn. iii. p. 786 (1877); Tacz. Orn. Pér. iii. p. 195, Table, p. 99 (1886); Berlepsch, Ibis, 1889, p. 181; id. Journ. f. Orn. 1889, pp. 291 (note), 314, t. iii. f. 1.

Sittace couloni, Rchnw. Journ. f. Orn. 1881, p. 270 (Consp. Psitt.

p. 158); id. Vogelbild. Nachtr. 76 (1883).

Very much like A. maracana, but differs in wanting the red on the forehead, lower back, and middle of the abdomen; besides the blue on the head, and especially on the cheeks, is purer and paler; the tip of the upper mandible is whitish; the naked skin round the eyes less extended. Total length 16 inches, wing 8.7, tail 9.5, bill 1.65, tarsus 0.85.

Hab. Peru.

# 12. Ara auricollis.

4. ARA.

Arara auricollis, Cass. Pr. Acad. Philad. vi. p. 372 (June 1853); id.

Journ. Ac. N. Sc. Philad. iii. p. 153, pl. 12 (1855); Schleg. Mus. P.-B. Psittaci, p. 7 (1864); id. op. cit. Revue, p. 2 (1874).

Sittace primoli, Bp. Compt. Rend. (28th Nov., 1853), p. 807 (Not. Coll. Delattre, p. 2, note) (1854); id. Rev. et Mag. de Zool. 1854, pp. 147, 150, n. 16; Souancé, Rev. et Mag. de Zool. 1856, p. 57; Ep. Naumannia, 1856, Consp. Psitt. n. 13; Souancé, Icov. Perr. pl. ii. (1857); Sousa, Mus. Nac. Lisb. Psittaci, p. 7 (1869).

Ara auritorques, Mass. & Souancé, Rev. et Mag. de Zool. 1854, p. 71.

Sittace chrysotorques, Licht. Nomencl. Av. p. 73 (1854).

Ara primoli, Des Murs, in Casteln. Exp. Am. du Sud, Ois. p. 13, pl. iv. (1855); Hartl. Journ. f. Orn. 1857, p. 42.

Ara auricollis, G. R. Gr. List Psitt. Brit. Mus. p. 27 (1859); Sclat. & Salv. Nomencl. Av. Neotrop. p. 111, n. 13 (1873); id. P. Z. S. 1879, p. 654.

Primolius auricollis, Bp., fide G. R. Gr. List Psitt. Brit. Mus., in syn. A. auricollis, p. 27 (1859); G. R. Gr. Hand-list, ii. p. 144, n. 8077 (1870).

Sittace auricollis, Finsch, Papag. i. p. 427 (1867); Pelz. Orn. Bras. pp. 255, 455, lii (1871); Gieb. Thes. Orn. iii. p. 494 (1877). Sittace xanthotorques, Natt. MS., fide Pelz. Orn. Bras. p. 255 (1871).

Adult. Green; forehead, crown, and lower parts of the cheeks brown-black; a slight bluish tinge behind the crown; a broad yellow collar on the hind neck; quills and primary-coverts blue: ontermost secondaries and outermost greater upper wing-coverts also blue, but edged with green on the outer webs; under wingcoverts green; tail blue, with the base of the feathers, especially of the middle ones, brown-red; quills and tail underneath golden olive; a concealed spot of reddish orange on the vent: bill horny black, with the tip whitish; feet vellowish or flesh-colour. Total length about 16 inches, wing 8.6, tail 9, bill 1.5, tarsus 0.7.

Female. Rather smaller than the male. Total length 15 inches,

wing 7.7, tail 7, bill 1.3.

Hab. Matogrosso, Bolivia, and Upper Paraguay.

Bolivia. C. Bridges [C.]. a. Ad. st. b. Ad. sk. South America. Eyton Coll. Salvin-Godman Coll. c. 9 ad. sk. Villa Maria, Brazil, Aug. (Natterer). Estiva, July (Natterer). Sclater Coll. d. ♀ ad. sk.

# Outhofas l'orse

#### 13. Ara macavuanna.

Arara-catinga, Marcgr. Hist. Bras. ix. p. 207 (1648). La Perruche-Ara de Cavenne, D'Aubent, Pl. Enl. 864. La Perriche-Ara, Buff. Hist. Nat. Ois. vi. p. 277 (1779). Parrot Maccaw, Lath. Syn. i. p. 205, n. 5 (1781); id. Gen. Hist. ii. p. 110 (1822).

Psittaeus manilatus (!), Bodd. Tabl. Pl. Enl. p. 52 (1783). Psittacus makawuanna, Gm. S. N. i. p. 314, n. 53 (1788); Kuhl, Consp. Psitt. p. 18 (1820).

Psittacus makavouanna, Lath. Ind. Orn. i. p. 84, n. 6 (1790); Shaw, Gen. Zool. viii, 2, p. 398 (1811); Bechst. Kurze Ueb. p. 66 (1811-12); Vieill. N. D. xxv. p. 361 (1817); id. Enc. Méth. iii. p. 1396 (1823); Voigt, Cuv. Ueb. p. 725 (1831). L'Ara macavouanne, Levaill. Perr. pl. 7 (1801).

 L'Ara maracana femelle, Levaill, Perr. pl. 7 (1801).
 Macrocercus makavouana, Vieill. N. D. ii. p. 260 (1816); id. Enc.
 Méth. iii. p. 1418 (1823); Steph. Gen. Zool. xiv. p. 113 (1826); Burm. Syst. Ueb. ii. p. 162 (note) (1856).

Arara makawuana, Spix, Ar. Bras. i. p. 28 (1824); Brehm, Mon. d.

Papag. t. 10 (1842). Sittace macayuanna, Wagl. Mon. Psitt. p. 664 (1832); Pelz. Orn. Bras. pp. 255, lii (1871). Ara makawuanna, G. R. Gr. Gen. B. ii. p. 412, n. 9 (1845); Bartl.

P. Z. S. 1882, p. 374 (Eastern Peru).

Comurus macavuana, Cab. in Schomb. Guian. i. p. 249, ii. p. 16, iii.

p. 729, n. 285 (1848).

Sittace makawanna, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 17; Souancé, Rev. et Mag. de Zool. 1856, p. 57; Bp. Naumannia, 1856, Consp. Psitt. r. 12.

Ara manilata, G. R. Gr. List Psitt. Brit. Mns. p. 27 (1859).

Primolius makawanna, Bp., fide G. R. Gr. l. c. (in syn. Aræ manilatæ) (1859).

Arara manilata, S hley. Mus. P.-B. Psittaci, p. 7 (1864); id. op. cit. Revue, p. 2 (1874).

Sittace macavuana, Finsch, Papag. i. p. 415 (1867); id. P. Z. S. 1870, p. 586; Gieb. Thes. Orn. iii. p. 496 (1877).

Primolius manilata, G. R. Gr. Hand-list, ii. p. 144, n. 8078 (1870).
 Sittace modesta, Rchnw. Journ. f. Orn. 1881, p. 270 (Consp. Psitt. p. 158); id. Vogelbild. Nachtr. 77 (1883).

Ara macuvuana, Salv. Ibis, 1886, p. 67.

Adult. Green, with an olive tinge on the neck, back, rump, upper tail-coverts, and lower parts; pileum greenish blue; lower part of the cheeks bluish green; chin, throat, and upper breast grey, with the feathers edged with green; a brown-red patch covering the middle of the lower abdomen and the vent; feathers of the thighs green, edged with brown-red; under tail-coverts bluish green; upper wing-coverts green, edged with vellowish green; quills, primary-coverts, and outermost greater upper wing-coverts pale blue, edged with green; under wing-coverts green, more or less yellowish, the greater ones golden olive; tail green; quills and tail underneath golden olive; naked skin of the face very broad, whitish, edged below with a row of brown-dotted feathers: "iris yellow" (Hauxwell); bill black; feet blackish. Total length 18 inches, wing 9.6, tail 9, bill 0.65, tarsus 0.7.

Female. Like the male, only somewhat smaller.

Hab. Guiana, and Amazons Valley to the base of the Andes of Ecuador and Peru.

a. 3 ad. sk. Borba, Brazil, Feb. (Natterer). Salvin-Godman Coll. Sclater Coll. b. Ad. sk. Surinam. Roraima, Brit. Guiana, Jan. Salvin-Godman Coll.  $c, d. \ \exists \ \supseteq \ \mathrm{ad. \ sk.}$ (Whitely). e. ∂ ad. sk. Elvira, E. Peru, Jan. (Hauxwell). Sclater Coll. Salvin-Godman Coll. f, y. Ad. sk. Sarayacu, Ecuador (Buckley).

## 14. Ara nobilis.

Psittaeus nobilis, Linn. Mus. Adolph. Frid. ii. p. 13 (1764); id. S. N. i. p. 140, n. 5 (syn. emend.) (1766); Gm. S. N. i. p. 314, n. 5 (1788); Lath. Ind. Orn. i. p. 85, n. 9 (1790); Shaw, Gen. Zool. viii. 2, p. 401 (1811); Bechst. Kurze Ueb. p. 66 (1811-12); Neuwied, Beitr. iv. p. 165 (1832); Hahn, Orn. Atl., Papag. p. 43, t. 27 (1835). Noble Parrot, Lath. Syn. i. p. 207 (1781); id. Gen. Hist. ii. p. 111 (1822).

Psittacus guianensis, part., Kuhl (nec Linn.), Consp. Psitt. p. 19 (syn.

emend.) (1820).

be posite a.

Psittacus cumanensis, Licht. Verz. Doubl. p. 6, n. 8 (1823).

Arara macrognathos, Spix, Av. Bras. i. p. 26, t. xxv. ff. 1, 2 (1824); Voigt, Cuv. Uebers. p. 732 (1831); Brehm, Mon. d. Papag. t. 12 (1842).

Psittacara frontatus, Vig. Zool. Journ. ii. p. 389 (1825). Arara cayana, Less. Tr. d'Orn. p. 188 (1831).

Sittace nobilis, Wagl. Mon. Psitt. p. 661 (1832); Hartl. Syst. Verz. Ges. Mus. p. 86 (1844); Finsch, Papay. i. p. 424 (1867); Pelz. Orn. Bras. pp. 256, 445, lii (1871); Gieb. Thes. Orn. iii. p. 496 (1877); Rehnw. Vogelbild. t. xxii. f. 6 (1878-83); id. Journ. f. Orn. 1881, p. 271 (Consp. Psitt. p. 159). Conurus macrognathus, Sw. Class. B. ii. p. 300 (1837).

Psittacara nobilis, Bowrj. Perr. pl. 22 (1837-38); Selb. Nat. Libr., Parrots, p. 97, pl. 8 (1836); Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 19; Souancé, Rev. et Mag. de Zool. 1856, p. 58; Bp. Naumannia, 1856, Consp. Psitt. n. 15; Sousa, Mus. Nac. Lisb. Psittaci, p. 7 (1869).

Conurus nobilis, G. R. Gr. Gen. B. ii. p. 413, n. 2 (1845); id. List Psitt. Brit. Mus. p. 32 (1859); id. Hand-list, ii. p. 147, n. 8092

(1870).

Psittacara cumanensis, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 26.

Macrocercus nobilis, Burm. Syst. Ueb. ii. p. 162 (1856).

Ara nobilis, Sclat. Cat. Am. B. p. 345, n. 2061 (1862); Sclat. & Salv. P. Z. S. 1867, p. 587 (Para); iid. Nomencl. Av. Neotrop. p. 111, n. 14 (1873); Salv. Cat. B. Strickl, Coll. p. 464 (1882); Sclat. List Vert. An. 8th ed. p. 341 (1883).

Arara nobilis, Schleg. Mus. P.-B. Psittaci, p. 8 (1864); id. op. cit.

Revue, p. 3 (1874).

Adult male. Green, underparts a little more yellowish green; forehead and a band over the eyes blue; carpal edge from the bend of wings and under wing-coverts searlet; first primary and first primary-coverts bluish on the outer web; greater under wingcoverts, quills, and tail-feathers underneath golden olive, quills dusky on the outer webs: upper mandible horny white, with the tip black; lower mandible horny brown-black; feet brownish black: "naked skin of the cheeks white; iris yellow" (Wied). Total length about 14 inches, wing 7.4, tail 7, bill 1.3, tarsus 0.65.

Female. Like the male, only a little smaller.

Young. No red feathers on the bend of the wing and along the carpal edge, which are green; only the middle under wing-coverts red; perhaps in the very young bird the whole of the under wingcoverts green.

Hab. Brazil from Para to Matogrosso and the Eastern Provinces.

a. Ad. st. Brazil. J. Gould, Esq. [P.]. Salvin-Godman Coll. b-f.  $\beta Q$  ad. Chapada, Matogrosso, Brazil, et juv. sk. March, Aug., and September (H. H. Smith). Cajutuba, Brazil, May (Natg. 3 ad. sk. Salvin-Godman Coll. terer). h. Ad. sk. Para. Sclater Coll.

### 15. Ara hahni.

Psittacus nobilis, Hahn (nec Linn.), Vög. aus As. etc. Lief. xiii. t. 2 (1822).

Pavouane Parrakeet, var. A, Lath. Gen. Hist. ii. p. 156 (1822). Conurus nobilis, Cub. (nec Linn.) in Schomb. Guian. iii. p. 729 (1848). Psittacara hahni, Souancé, Rev. et Mag. de Zool. 1856, p. 58; Bp. Naumannia, 1856, Consp. Psitt. n. 16; Souancé, Icon. Perr. pl. vi. (1857).

Conurus hahni, G. R. Gr. List Psitt. Brit. Mus. p. 32 (1859); id. Hand-list, ii. p. 146, n. 8093 (1870).

Arara hahni, Schleg. Mus. P.-B. Psittaci, p. 8 (syn. emend.) (1864); id. op. cit. Revue, p. 3 (1874).

Sittace halni, Finsch, Papag, i. p. 426 (1867), ii. p. 944 (1868); id.
P. Z. S. 1870, p. 586; Pelz. Orn. Bras. pp. 256, 445, lii (1871);
Gieb. Thes. Orn. iii. p. 495 (1877); Rehnw. Journ. f. Orn. 1881, p. 271 (Consp. Psitt. p. 159); id. Vogelbild. text of pl. lxxii. f. 6 (1878-83).

Conurus cyanothrix, Natt. MS. fide Finsch, Papag. ii. p. 427 (1867). Ara hahni, Sclat. P. Z. S. 1872, p. 880; Sclat. S. Salv. Nomencl. Av. Neotrop. p. 111, n. 15 (1873); Sclat. List Vert. An. 8th ed. p. 341 (1883); Salv. Ibis, 1886, p. 67.

Adult male. Similar to the male of A. nobilis, only smaller and with the bill entirely horny black. Total length 13 inches, wing 6.5, tail 5.8, bill 1.2 to 1.0, tarsus 1.5.

Hab. Guiana, Trinidad, and Rio Branco.

A. hahni, like the preceding species, shows sometimes a few red feathers on the thighs.

a. Ad. sk. Surinam, Guiana. Sclater Coll. b. Ad. sk. Maroni R., Surinam (Verdey). Salvin-Godman Coll. c. Ad. st. R. Schomburgk [C.]. British Guiana.  $d, e. \ \beta \$  ad. sk. Roraima, Brit. Guiana, Jan. Salvin-Godman Coll. (Whitely). f. Ad. sk. Trinidad. Purchased. Rio Brancho, Brazil, Feb. g. 3 ad. sk. Salvin-Godman Coll. (Natterer). h. Ad. sk. Rio Brancho, Brazil (Natterer). Sclater Coll.

#### 5. RHYNCHOPSITTACUS.

Type.

Rhyncopsitta, Bp. Rev. et Mag. de Zool. 1854, p. 149 R. pachyrhynchus.

Range. From Southern Texas to Central Mexico.

# 1. Rhynchopsittacus pachyrhynchus.

Macrocercus pachyrhynchus, Sw. Phil. Mag. new ser. i. p. 439 (1827).

Psittacus strenuus, Licht. Preis-Verz. Mevico, p. 1 (1830); id. Journ. f. Orn. 1863, p. 54.

Psittaeus pascha, Wagl. Isis, 1831, p. 525.

Sittace pachyrhyncha, Wagl. Mon. Psitt. p. 667, t. xxv. (1832);
 Hartl. Syst. Verz. Ges. Mus. p. 86 (1844); Finsch, Papag. i.
 p. 428 (1867); Gieb. Thes. Orn. iii. p. 497 (1877).

Psittacus pachyrhynchus, Hahn, Orn. Atl., Papag. p. 94, t. 73

(1840).

Ara pachyrhyncha, G. R. Gr. Gen. B. ii. p. 412, n. 7 (1845); id. List Psitt. Brit. Mus. p. 29 (1859); Selat. P. Z. S. 1859,

p. 368.

Rhynchopsitta pachyrhyncha, Bp. Rev. et Mag. de Zool. 1854, p. 149, n. 13; Souancé, Rev. et Mag. de Zool. 1856, p. 57; Bp. Naumannia, 1856, Cousp. Psitt. n. 30; Souancé, Icon. Perr. pl. v. (1857); Sclat. P. Z. S. 1857, p. 230; Baird, B. of N. Am. p. 66 (1858); G. R. Gr. Hand-list, ii. p. 145, n. 8085 (1870); Salvin, Ibis, 1871, pp. 87, 91; Scl. & Salv. Nomencl. Av. Neotrop. p. 111 (1873); Salvin, Cat. B. Strickl. Coll. p. 464 (1882); Ridgw. Man. N. Am. B. p. 269, pl. 1xxvii. f. 2 (1887); Cooke, Rev. B. Migr. Miss. Valley, p. 124 (1888); Salv. & Godm. Ibis, 1889, p. 242.

Conurus pachyrhynchus, Schleg. Mus. P.-B. Psittaci, p. 11 (1864); id. op. cit. Revue, p. 3 (1874); Rehnw. Journ. f. Orn. 1881, p. 273

(Consp. Psitt. p. 161); id. Vogelbild. Nachtr. 78 (1883).

Adult male. Green, cheeks and ear-coverts brighter; sinciput, lores, a broad superciliary stripe, edge and bend of the wing, some feathers on the carpal edge, and thighs dark red; a blackish-brown spot in front of the eyes; greater under wing-coverts yellow; quills underneath blackish, the tail underneath also blackish with a slight olive tinge; bill black; feet blackish. Total length about 17 inches, wing 11 to 10:5, tail 7:4, bill 1:6, tarsus 7:5.

Female. Exactly like the male.

Young. Differs from the adult in having the red on the sinciput less extended, no red superciliary stripe, the lores brown-red, much less red colour on the bend of the wing and carpal edge, and the bill horn-whitish, except at the base of the edges of the upper mandible, where it is horn-blackish.

Hab. Central and Northern Mexico and South-western Texas.

a. Ad. sk.	Mexico.	J. Baker, Esq. [P.].
b. Ad. sk.	Mexico.	Purchased.
e. Juv. sk.	Mexico.	Sclater Coll.
d. Ad. sk.	Mexico.	Salvin-Godman Coll.
e. Ad. sk.	Jalapa, Mexico (de Oca).	Salvin-Godman Coll.
$f, g, h. \ \exists \ Q \ ad.$	Ciudad Durango, Mexico, July,	Salvin-Godman Coll.
et 3 imm. sk.	Nov. (A. Forrer).	
i. Juv. sk.	Mexico.	Gould Coll.

6. CONURUS.	Trno
Conurus, Kuhl, Consp. Psitt. p. 4 (1820); Sw.	Type.
Class, B. ii. p. 300 (1837)	C. leucophthalmus.
(=Conurus). Psittacara, Vig. Zool. Journ. ii. p. 388 (1825).	C. leucophthalmus.
Arara, Less. (nec Spix) Man. d'Orn. ii. p. 143	O. leucophinamius,
(1828)	C. leucophthalmus.
(1828) Psittacus, subgen. Guarouba, Less. Tr. d'Orn.	~ .
p. 210 (1831)	C. guarouba.
Nat., Ois. i. p. 163 (1851?); id. in Casteln.	
Exp. Am. Sud, Zool. i. Ois. p. 13, pl. ii (1855)	
(=Conurus).	
Eupsittula, Bp. Compt. Rend. Ac. Sc. Pavis,	0 1 - 1
xxxvii. p. 807 (1853)	. C. canicularis.
p. 150	C. nenday.
	C. guarouba.
Evopsitta, <i>Bp. l. c.</i> p. 151	« C. euops.
Maracara, Des Murs (1851), fide G. R. Gr.	
List Gen. & Subgen. B. p. 87 (1855). Aratinga, Bp. Naumannia, 1856 (nec 1854),	
Consp. Psitt. gen. 8	C. guarouba.
Consp. Psitt. gen. 8  Eupsittaca, Cab. Journ. f. Orn. 1862, p. 335	· ·
(=Eupsittula).	
Range. From Mexico, through Central Ame	rica and West Indies
to South America as far as Bolivia and Paragi	
Key to the Species.	
a. Tail green, with the inner webs of the rectrices	
dull red.	
a'. Pileum and sides of the head dull blue; upper mandible whitish, under mandible	•
blackish	acuticaudatus, p. 172.
b'. Only the anterior part of the pileum blue;	, , , , , , , , , , , , , , , , , , , ,
sides of the head green; both mandibles	
whitish like the year of the	hæmorrhous, p. 173.
b. Tail entirely yellow, like the rest of the plumage, except the quills, which are green;	
bill thick, under mandible very broad	guarouba, p. 174.
c. Tail underneath blackish or very dark olive;	7.1
wings with the primary-coverts and quills	

more or less blue.

c'. Head entirely or partly yellow-orange; base of tail above distinctly olive, the

a". Upper and under parts in the adult bird yellow, more or less tinged with orange;

<sup>\*</sup> Des Murs attributes the genus Maracana to Azara (Voy. dans l'Amér. mér. 1809) (!). I do not know whether the date, 1851, given also by Gray, is correct; the first three volumes of 'the Birds in Chenu's 'Encyclopédie' were reviewed by Hartlaub in 1854, as published in 1853.

smaller and median upper wing-coverts
yellowsolstitialis, p. 175.
o. Upper back green; lower back green,
tinged with red.
a". Head and neck bright yellow, sides
of the head tinged with orange-red . jendaya, p. 177.
b'''. Crown yellow-orange; forehead,
lores, and region round the eyes red;
cheeks green
d'. Head brown-black
d. Under surface of the tail olive, more or less
shining or golden.
f'. No blue colour on the wings; primary-
coverts and quills green.
c". Plumage with red patches in the adult
birds.
$c^{\prime\prime\prime}$ . Forehead and crown with a broad red
patch.
$a^4$ . Whole of the lores red.
a <sup>3</sup> . Red of the forehead, crown, and
lores covering more or less also
the cheeks,
a <sup>6</sup> . Larger; wing 8 to 7.7 inches;
frontal edge dark red, edge of
the wing and carpal region
green
frontal edge not of a dark red,
but uniform with the rest of
the head; edge of the wing
and carpal edge red rubrolarvatus, p. 182.
b. Red of the head covering no part
of the cheeks, and confined to
the front part of the pileum frontatus, p. 183.
b4. Lores near the nostrils red, near the
eyes green.
c <sup>5</sup> . Smaller under wing - coverts red,
greater ones yellow finschi, p. 184.
d <sup>i</sup> . Smaller under wing - coverts
green, greater ones olive wagleri, p. 184.
$d'''$ . No red patch on the forehead. $c^4$ . Greater under wing-coverts olive
or yellow.
$e^5$ . Greater under wing-coverts olive.
c <sup>6</sup> . Smaller; wing 5·2 inches euops, p. 185.
d <sup>6</sup> . Larger: wing 6.7 inches, chloropterus, p. 186.
f 5. Greater under wing-coverts
yellow.
e <sup>6</sup> . Cheeks green, if spotted with
red, only accidentally so leucophthalmus, p. 187.
$f^{\epsilon}$ . Cheeks constantly with red
patches on the lower part callogenys, p. 188.
d <sup>4</sup> . Greater under wing-coverts red maugei, p. 189.
d". No red whatever in the normal green
plumage.  e'''. Lighter green underneath; feet larger. holochlorus, p. 189.
$e^{\prime\prime\prime}$ . Lighter green underneath; feet larger. holochlorus, p. 189.

f'''. Deeper green underneath; feet brevipes, p. 191. smaller g'. Wings partly blue; primary-coverts and quills more or less blue.

e". No broad orange-red patch on the forehead. g'''. No yellow circle round the eyes; cheeks green. e4. Throat and upper breast dusky brown; small feathers between the nostrils orange, but not always present ..... nanus, p. 191. f<sup>4</sup>. Throat and upper breast olive, more or less brown; small orange feathers between the nostrils more developed and always present . . . . v aztec, p. 192. h". A yellow circle round the eyes, broader below than above, in the adult bird. q4. Yellow circle round the eves very narrow, pale, and scarcely visible above; lower breast and abdomen uniform orange, more or less dull. cactorum, p. 194.  $h^4$ . Yellow circle round the eyes more orange and broader; ear-coverts brown, like the cheeks. g<sup>5</sup>· Crown distinctly tinged with blue. æruginosus, p. 195. h<sup>5</sup>. Crown green, scarcely tinged with blue  $\dots$  i'''. Forehead, sides of the head, and ocularis, p. 197. throat entirely yellow-orange ... .. pertinax, p. 197. f". A broad orange-red or flame-colour patch on the forehead, covering more or less the anterior part of the crown. k'". Inner webs of the quills olive, frontal patch more extended and yellower; a yellow-orange circle round the eyes. aureus, p. 199. l". Inner webs of the quills blackish; frontal patch less extended and redder; no yellow circle round the eyes ....., canicularis, p. 201.

# 1. Conurus acuticaudatus.

Theore cond

Maracana cabeza azulada, Azara, Apunt. Hist. Nat. Parag. i. p. 421, n. 278 (1802).

Maracana à tête bleue, Azara, Voy. (ed. Sonn.) iii. p. 61 (1809). Psittacus acuticaudatus, Vieill. N. D. xxv. p. 369 (1817); id. Enc. Méth. iii. p. 1402 (1823).

Blue-crowned Maccaw, Lath. Gen. Hist. ii. p. 113 (1822).

Comurus acuticaudatus, G. R. Gr. Gen. B. ii. p. 413, n. 1 (partim) (1845); Des Murs, Icon. Orn. (text part.), pl. 31 (1846); Hartl. Ind. Azar. Apunt. p. 18 (syn. emend.) (1847); Sclat. Cat. Am. B. p. 347, n. 2069 (1862); Finsch, Papag. i. p. 450 (1867); G. R. Gr. Hand-list, ii. p. 146, n. 8094 (1870); Gieb. Thes. Orn. i. p. 760 (1872); Finsch, P. Z. S. 1873, p. 570; Sclat. & Salv. Nomencl. Ar. Neotrop. p. 111, n. 3 (1873); Sclat. & Salv. P. Z. S.

1879, p. 635; Rehnw. Journ. f. Orn. 1881, p. 276 (Consp. Psitt. p. 164); White, P. Z. S. 1882, p. 621; Rehnw. Vogelbild. Nachtr. 82 (1883); Sclat. List Vert. An. 8th ed. p. 342 (1883); Berl.

Journ. f. Orn. 1887, p. 121; Sclat. Argent. Orn. ii. p. 42 (1889).
Psittacara acuticaudata, Bp. Rev. et May. de Zool. 1854, p. 150,
n. 22; Souancé, Rev. et May. de Zool. 1856, p. 58; Bp. Naumannia, 1856, Consp. Psitt. n. 17 (syn. emend.); Sousa, Mus. Nac. Lisboa, Psittaci, p. 8 (1869).

Evopsitta acuticaudata, Souancé, Icon. Perr. pl. iv. (1857).

Comurus cyanops, G. R. Gr. List Psitt. Brit. Mus. p. 33 (1859); Schleg. Mus. P.-B. Psittaci, p. 11 (1864); G. R. Gr. Hand-list, ii. p. 146, n. 8095 (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 3 (1874).

Conurus fugax, Burm. Journ. f. Orn. 1860, p. 243; id. Reise La-

Plata St. ii. p. 441 (1861).

Conurus glaucifrons, Leybold, Leopoldina, Heft viii. no. 7, p. 52 (1873); id. Escurs. Pamp. Argent, p. 38 (1873); Finsch, P. Z. S. 1873, p. 570; Sclat. Ibis, 1873, p. 430; Mart. Journ. f. Orn. 1875, p. 445.

Adult male. Green; pileum, lores, cheeks, and ear-coverts dull blue; breast in some specimens with a slight bluish tinge; greater under wing-coverts dusky olive; quills green, on the inner webs olive, underneath golden olive, dusky towards the tips and on the outer webs; tail-feathers green, underneath olive, the lateral feathers with the base of the inner webs above dull brown-red, below golden red: upper mandible whitish with the tip blackish; under mandible blackish; feet yellowish flesh-colour; iris red; naked skin round the eyes white. Total length about 14 inches, wing 7.7. tail 7.5, bill 1.15, tarsus 0.65.

Female. Similar to the male.

Young. Feathers of the pileum green, tipped with blue; cheeks green.

Hab. Bolivia, Paraguay, Northern Argentina, and Uruguay.

The young bird resembles to a certain extent the following species.

Bolivia. a. Ad. sk. C. Bridges [C.]. (Type of C. cyanops, Gray.) Bolivia (Bridges). Salvin-Godman Coll. b, c. Ad. et juv. sk. d. 3 ad. sk. Catamarca, Argentine Rep. Sclater Coll. (White).  $e, f. \ \vec{\circ} \ \Omega \ ad. \ sk.$ Cosquin, Cordova, Arg. Rep., E. W. White  $\lceil C_{\cdot} \rceil$ . June, July. g, h. ♂♀ ad. sk. Uruguay, Dec. Alau Peel, Esq. [C.]. i. Skeleton.

#### 2. Conurus hæmorrhous.

? Psittacus nobilis, Scop. Ann. I. Hist. Nat. p. 28 (1769).

Aratinga hæmorrhous, Spix, Av. Bras. i. p. 29, t. xiii. (1824); Steph. Gen. Zool. xiv. p. 135 (1826); Brehm, Mon. d. Papag. t.15 (1842), Sittace acuticaudata, Wagl. (nec Vieill.) Mon. Psitt. p. 662 (1832). Psittacus acuticandatus, Hahn (nec Vieill.), Orn. Atl., Papag. p. 80 (syn. emend.) t. 60 (1836).

Psittacara cæruleofrontata, Bourj. Perr. pl. 17 (1837–38).

Conurus acuticaudatus (part.), G. R. Gr. Gen. B. ii. p. 413, n. 13 (1845); Burm. (nec Vicill.) Syst. Ueb. ii. p. 156 (1856); G. R. Gr. (nec Vicill.) List Psitt. Brit. Mus. p. 32 (1859); Schleg. Mus. P.-B. Psittaci, p. 11 (1864); id. op. cit. Revue, p. 3 (1874).

Conurus modestus, Licht. Nomencl. Av. p. 73 (1854).

Psittacara hæmorrhoa, Souancé, Rev. et Mag. de Zool. 1856, p. 58. Psittacara hæmorrhous, Bp. Naumannia, 1856, Consp. Psitt. n. 18. Evopsitta hæmorrhoa, Souancé, Icon. Perr. in the text of pl. iv. (1857).

Conurus hæmorrhous, Finsch, Papag. i. p. 453 (1867); G. R. Gr. Hand-list, ii. p. 146, n. 8097 (1870); Pelz. Orn. Bras. pp. 256, 445, lii (1871); Gieb. Thes. Orn. i. p. 763 (1872); Solat. § Salv. Nomencl. Av. Neotrop. p. 111, n. 4 (1873); Rehnw. Vogelbild. t. ii. f. 3 (1878-83); id. Journ. f. Orn. 1881, p. 276 (Consp. Psitt. p. 164); Selat. List Vert. An. 8th ed. p. 342 (1883).

Conurus hæmathorrous, Garr. P. Z. S. 1874, p. 587.

Adult male. Similar to C. acuticaudatus, from which it differs in having only the forehead and crown bluish, the cheeks green, the general plumage brighter green, and both mandibles whitish fleshcolour; feet dirty flesh-colour; naked skin round the eyes whitish flesh-colour: iris yellow-brown, according to Spix yellow, and to Burmeister orange. Total length about 13 inches, wing 7.1, tail 6, bill 1.1, tarsus 0.59.

Young. "Wants the blue on the forehead and crown" (Von

Siebold fide Finsch).

Hab. Brazil, from Bahia to Cujaba in the interior.

a. Ad. st. S. America. Zoological Soc. Coll. b. Ad. st. Zoological Soc. Coll.

c. Ad. sk. Brazil. Massena Coll. d. Q skeleton. Zoological Society.

# 3. Conurus guarouba.

Psittaca brasiliensis lutea, Briss. Orn. iv. p. 369 (1760).

Brasilian Yellow Parrot, Lath. Syn. i. p. 225, n. 28 (1781); id. Gen. Hist. ii. p. 146, with var. A (1822); Shaw, Gen. Zool. viii. 2,

p. 449 (1811).

Psittacus guarouba, Gm. S. N. i. p. 320, n. 66 (syn. emend. et excl. var. β) (1788); Kuhl, Consp. Psitt. p. 23 (1820); Hahn, Vög. aus As. etc. Lief. xiii. t. 4, t. 5 (head) (1822); Voigt, Cuv. Üebers. p. 731 (1831); Hahn, Orn. Atl., Papag. p. 27, t. 13 (1834), p. 44, t. 28 (1835).

Psittacus luteus, Lath. (nec Bodd.) Ind. Orn. i. p. 92, n. 32 (excl. var. β) (1790); Licht. Abh. Berl. Akad. 1817, p. 167; Vieill. N. D. xxv. p. 365 (part.) (1817); id. Enc. Méth. iii. p. 1399 (part.)

(1823).

Yellow Maccaw Parrot, Lath. Gen. Hist. ii. p. 144 (1822).

Psittacus chloropterus, Vieill. Enc. Méth. iii. p. 1390 (1823). Aratinga carolinæ augustæ, Spix, Av. Bras. i. p. 29 (1824); Steph. Gen. Zool. xiv. p. 134 (1826).

Aratinga carolinæ, Spix, Av. Bras. i. t. xii. (1824); Brehm, Mon. d.

Papag. t. 14 (1842).

Guaruba lutea, Less. Tr. d'Orn. p. 211 (1831).

Sittace lutea, Wagl. Mon. Psitt. p. 657 (1832).

Psittacara guarouba viride-lutea, Bourj. Perr. pl. 18 (1837–38).
Conurus luteus, G. R. Gr. Gen. B. ii. p. 413, n. 7 (1845); Burm.
Syst. Ueb. ii. p. 166 (1856); G. R. Gr. List Psitt. Brit. Mus.
p. 35 (1859); Schley. Mus. P.-B. Psittaci, p. 16 (1864); Scht. P. Z. S. 1867, p. 587; Finsch, Papag. i. p. 455 (1867); Sclat. P. Z. S. 1871, p. 772; Gieb. Thes. Orn. i. p. 764 (1872); Sclat. § Salv. Nomencl. Av. Neotrop. p. 111, n. 5 (1873); Schleg. Mus. P.-B. Psittaci, Revue, p. 4 (1874); Schmidt, P. Z. S. 1880, p. 310; Schat. P. Z. S. 1880, p. 697; id. List Vert. An. 8th ed. p. 343 (1883).

Heliopsitta guarouba, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 31; Souancé, Rev. et Mag. de Zool. 1856, p. 60; Sousa, Mus. Nac.

Lisboa, Psittaci, p. 8 (1869).

Aratinga guarouba, Bp. Naumannia, 1856, Consp. Psitt. n. 28. Aratinga luteus, G. R. Gr. Hand-list, ii. p. 147, n. 8107 (1870). Conurus guaruba, *Pelz. Orn. Bras.* pp. 256, 445, lii (1871).

Adult. Yellow; quills above dark green, below golden olive, dusky towards the tip and on the outer web: bill horn-yellow; feet fleshcolour; iris brown or dark orange. Total length about 14 inches, wing 8.6, tail 6.3, bill 1.45, tarsus 0.65.

Young. Cheeks and upper wing-coverts with scattered green

feathers (Finsch).

Hab. Para, N.E. Brazil.

a. Ad. st. Brazil. Purchased. 6. Ad. sk. Brazil. Riocour Coll. c. Ad. sk. Brazil. Purchased. d. Ad. sk. Para. Salvin-Godman Coll. e. \$\delta\$ ad. sk.f. Jun. sk. Para, July (Wallace). Sclater Coll. N. Brazil (A. D. Bartlett). Sclater Coll. g. ♀ ad. sk. Zoological Society.

#### 4. Conurus solstitialis.

Petit Perroquet d'Angola, Alb. Av. iii. p. 6, pl. 13 (1731). Psittaca angolensis lutea, Briss. Orn. iv. p. 371 (1760).

Psittacus solstitialis, Linn. S. N. i. p. 141, n. 12 (1766); Gm. S. N. i. p. 320, n. 12 (1788); Lath. Ind. Orn. i. p. 92, n. 31 (1790); J. F. Mill. & Shaw, Cinelia Physica, p. 11, pl. v. (1796); Shaw, Gen. Zool, viii. 2, p. 448, pl. 65 (from Levaillant) (1811); Bechst. Kurze Ueb. p. 71 (1811–12); Kuhl, Consp. Psitt. p. 27 (1820); Vieill, Enc. Méth. iii. p. 1389 (1823); Voigt, Cuv. Uebers. p. 727 (1831).

Perruche jaune de Cayenne, D'Aubent. Pl. Enl. 525.

Psittacus maculatus, Müll. S. N. Suppl. p. 76, 6 c (1776); Cass. Pr.

Ac. Philad. 1864, p. 239.

Guarouba ou Perriche jaune, Buff. Hist. Nat. Ois. vi. p. 272 (1779). Angola Yellow Parrot, Lath. Syn. i. p. 224, n. 27 (1781); id. Gen. Hist. ii. p. 142 (1822). Psittacus luteus, Bodd. Tabl. Pl. Enl. p. 30 (1783) (ex Pl. Enl. 525);

Vieill. N. D. xxv. p. 365 (part.) (1817); id. Enc. Méth. iii. p. 1399

(part.) (1823).

Perruche Ara Guarouba (mâle), Levaill. Perr. pl. 18 (1801). Perruche Ara Guarouba (femelle), Levaill. Perr. pl. 19 (1801) (var.). Perruche Ara Guarouba (jeune), Levaill. Perr. pl. 20 (1801).

Psittacus guaronba, Hahn, Vöy, aus As, etc. Lief, xiii, t. 3 (1822); id. Orn. Atl., Papag. p. 27, t. 13 (1834).

Aratinga luteus sive guarouba, Spir, Av. Bras. i. p. 30, t. xiv. a (1824); Brehm, Mon. d. Papag. t. 17 (1852).

Aratinga solstitialis, Steph. Gen. Zool. xiv. p. 135, n. 4 (1826). Aratiuga guarouba, Steph. Gen. Zool. xiv. p. 135, n. 5 (1826).

Conurus solsticialis, part., Less. Tr. d'Orn. p. 212 (1831). Sittace solstitialis, Wagl. Mon. Psitt. p. 655 (1832).

Psittacaria solstitialis, Schomb. Reis. Guian. u. Orinoko, p. 377 (1841).

Conurus solstitialis, G. R. Gr. Gen. B. ii. p. 413, n. 9 (1845); Cab. in Schomb. Brit. Guian. p. 728 (1848); Bp. Rev. et May. de Zool. 1854, p. 150, n. 33; Souancé, Rev. et May. de Zool. 1856, p. 60; Bp. Naumannia, Consp. Psitt. n. 60; Burm. Syst. Ueb. ii. p. 166 (1856); G. R. Gr. List Psitt. Brit. Mus. p. 36 (1859); Sclut. Cat. Am. B. p. 347, n. 2073 (1862); Schleg. Mus. P.-B. Psittaci, p. 17 Am. B. p. 544, ft. 2015 (1802); Scheeg. Mas. P.-B. Fshtael, p. 11 (1864); Finsch, Papag. i. p. 491 (1867); Sonsa, Mus. Nac. Lisboa, Psittaci, p. 8 (1869); G. R. Gr. Hand-list, ii. p. 147, n. 8109 (1870); Pelz. Orn. Bras. pp. 257, 446, lii (1871); Gieb. Thes. Orn. i. p. 767 (1872); Schet. & Salv. Nomencl. Av. Neotrop. p. 112, n. 15 (1873); Schleg. Mus. P.-B. Psittaci, Revne, p. 4 (1874); Rehaw. Vogelbild. t. ii. ft. 6 (1878–33); id. Journ. ft. Orn. 1881, p. 278 (Consp. Psitt. p. 166); Sclat. List Vert. An. 8th ed. p. 343 (1883); Salvin, Ibis, 1886, p. 67; W. L. Sclat. Ibis, 1887, p. 317. ? Conurus luteus, Sclat. P. Z. S. 1862, p. 185.

Conurus maculatus, Cuss. Pr. Acad. Philad. 1864, p. 239 (in syn. P. maculati)\*.

Adult male. Yellow, tinged with orange-red on the forehead, sides of head, lower breast, abdomen, lower back, and rump, and sometimes also on the neek, throat, back, and breast, or all over the vellow feathers; under tail-coverts green, tinged with yellow; smaller upper wing-coverts and the whole of the under wing-coverts yellow; greater upper wing-coverts green, irregularly tipped with vellow; bastard wing, primary-coverts, and secondaries dark blue, edged with green on the outer edges; primaries with the outer web green towards the base, blue towards the tip; tail olive-green towards the base of the feathers, blue towards the tip, the outer tail-feather of each side with the whole of the outer web blue; quills and tail-feathers below olive, dusky towards the tips: bill dusky horn-colour; feet flesh brown. Total length about 12 inches, wing 6.2, tail 5.5, bill 0.9, tarsus 0.5.

Adult female. Like the male.

Young. Head and neck yellow-orange, more or less green on the pileum: forehead, lores, region round the eyes, and ear-coverts

<sup>\*</sup> The following synonyms also most probably belong to the present species :-

Psittaca mexicana lutea, Briss. Orn. iv. p. 370 (1760).
Psittacus merulinus, Scop. Ann. I. Hist. Nat. p. 30 (1769).
Mexican Yellow Parrot, Lath. Syn. i. p. 226 (1781).
Psittacus mexicanus, Gm. S. N. i. p. 320 (1788).
Psittacus luteus, var. β, Lath. Ind. Orn. i. p. 93 (1790).
Mexican Yellow Parraket, Shaw, Gen. Zool. viii. 2, p. 450 (1811).
Pseciliar Vellow Parraket, Shaw, Gen. Zool. viii. 2, p. 450 (1811). Brazilian Yellow Parrot, var. B, Lath. Gen. Hist. ii. p. 146 (1822).

orange-red; upper back and scapulars green, slightly edged with yellow; lower back and rump tinged with red; upper tail-coverts green, with a yellow tinge; throat greenish; breast and abdomen orange-red; under tail-coverts green, with paler edges; upper wing-coverts green, edged with yellowish; quills, primary-coverts, and tail as in the adult bird: bill horn-brown.

Immature. The immature bird in transitional stage changes the green feathers of the back and the wing-coverts into yellow ones; also the olive-green feathers of the lower back and upper tail-coverts are changed by moulting into yellow ones; the greenish tinge of the throat gradually disappears, and the underparts become more and more yellow, tinged with orange.

Hab. Guiana and Rio Brancho.

In the young stage this bird shows a great resemblance to C. jendaya adult, from which it may be easily distinguished by the yellow tinge of the green back, the yellow edges of the upper wing-coverts, the greenish tinge of the throat, and by the yellow-orange tinge of the lower parts.

a, b. Ad. st. Brazil. Zoological Society's Coll. c. 2 ad. sk. Rio Mahu, Brazil (Natterer). Sclater Coll. d. Imm. sk. Purchased. e-p. ♂♀ ad. et Quonga, British Guiana, Oct. Salvin-Godman Coll. juv. sk. & Nov. (H. Whitely).

### 5. Conurus jendaya.

Jendaya, Marcgr. Hist. rer. nat. Bras. ix. p. 206 (1648); Licht. Abh. Berl. Akad. 1817, p. 167.

Psittacula brasiliensis lutea, Briss. Orn. iv. p. 399 (1760).

Yellow-headed Parrot, Lath. Syn. i. p. 224, n. 26 (1781); id. Gen. *Hist.* ii. p. 142 (1822).

Psittacus jandaya, Gm. S. N. i. p. 319, n. 65 (1788).

Psittacus jendaya, Lath. Ind. Orn. i. p. 92, n. 30 (1790); Shaw, Gen. Zool, viii. 2, p. 451 (1811); Bechst. Kurze Ueb, p. 71 (1811–12); Vieill. N. D. xxv. p. 366 (1817); Kuhl, Consp. Psitt. p. 94 (1820); Vieill. Enc. Méth. iii. p. 1399 (1823); Hahn, Orn. Atl., Papag. p. 78 (partim), t. 58 (1836); Thienem. Fortyft. d. ges. Vög. p. 76 (egg) (1846).

Psittacus aureus, Donov. (nec Gm.) Natural. Reposit. ii. pl. 72

(1824).

Aratinga chrysocephalus, Spix, Av. Bras. i. p. 30, t. xiv. (1824); Steph. Gen. Zool. xiv. p. 135 (1826); Brehm, Mon. d. Papag. t. 16 (from Spix) (1842).

Sittace jendaya, part., Wugl. Mon. Psitt. p. 653 (1832); Hartl. Syst. Verz. Ges. Mus. p. 86 (1844).

Trichoglossus (Psittacus) cruentus, Less. Echo du Monde Sav. 1844,

p. 126; id. Descr. d. Mamm. et Ois. p. 186 (1847).
Conurus jendaya, part., G. R. Gr. Gen. B. ii. p. 413, n. 10 (1845);
Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 32; Souancé, Rev. et
Mag. de Zool. 1856, p. 60 (partim); Bp. Naumannia, 1856, Consp. Psitt. n. 61 (partim); Finsch, Papag. i. p. 495 (partim) (1867); Sonsa, Mus. Nac. Lisboa, Psittaci, p. 8 (1869); Pelz. Orn. Bras. VOL. XX.

pp. 257, 456 (1871); Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 16 (partim) (1873); Garrod, P. Z. S. 1873, pp. 465, 633, 1874, p. 587; Rchnw. Vogelbild. t. ii. f. 5 (1878-83); Forbes, Ibis, 1881, p. 351; Salv. Cat. B. Strickl. Coll. p. 465 (1882); Sclat. List Vert. An. 8th ed. p. 343 (1883).

Psittacus auricomus, Thienem. Fortpfl. d. ges. Vog. t. xiv. f. 9 (egg)

(1846).

Conurus jandaya, part., G. R. Gr. List Psitt. Brit. Mus. p. 36 (1859); Sclat. Cat. Am. B. p. 347, n. 2072 (1862); Schleg. Mus. P.-B. Psittaci, p. 18 (part. and syn. emend.) (1864); G. R. Gr. Handlist, p. 147, n. 8110 (partim) (1870).

Conurus pyrocephalus, part., Rchnw. Journ. f. Orn. 1881, p. 279

(Consp. Psitt. p. 167).

Adult. Head and neck yellow, more or less tinged with orangered on the forehead, sides of the head, and especially round the naked periophthalmic region, and on the throat; back, scapulars, and upper tail-coverts green; feathers of the lower back and rump edged with orange-red; breast and abdomen orange-red; upper wing-coverts green; bastard wing, primary-coverts, and secondaries blue; primaries blue, with the base of the outer web green; inner web of the quills, their under surface, and greater under wingcoverts blackish; carpal edge green; smaller under wing-coverts orange-red; under tail-coverts green, sometimes with a bluish tinge; tail above blue, with the base olive, below black, tinged with olive towards the base of the inner web of the feathers; the outer tail-feather above entirely blue: bill dusky horn-colour; feet blackish; "iris brown" (Finsch), "grey" (Burmeister). Total length about 12 inches, wing 6·1, tail 5·6, bill 0·9, tarsus 0·55.

Hab: Eastern Brazil.

a. Ad. st. S. America. Zoological Society. b, c. Ad. sk. Brazil. Sclater Coll. d. Ad. sk. Pernambuco, Brazil (Craven). Sclater Coll.

# 6. Conurus auricapillus.

Psittacus auricapillus, Licht. apud Kuhl, Consp. Psitt. p. 20 (1820); Ill. apud Licht. Verz. Doubl. p. 6 (1823); Voigt, Cuv. Ueb. p. 726 (1831); Neuw. Beitr. iv. p. 178 (1832); Hahn, Orn. Atl. p. 35, t. 19 (1834).

Psittacus pyrocephalus, Hahn, Vög. aus As. etc. Lief. xiv. t. 1

(1822).

Aratinga aurifrons, Spix, Av. Bras. i. p. 32, t. xvi. f. 1, 2 (1824); Steph. Gen. Zool. xiv. p. 136 (1826); Brehm, Mon. d. Papag. t. 16 b (1842) (from Spix).

Psittacara auricapillus, Vig. Zool. Journ. ii. p. 389 (1825).

? Psittacus solstitialis, juv., Voigt, Cuv. Ueb. p. 726 (1831). Arara auricapillus, Less. Tr. & Orn. p. 188 (1831).

Conurus auricapillus, Less. Tr. d'Orn. p. 212 (1831); Bourj. Perr. pl. 42, 42 bis (1837–38); Lieht. Nomenel. Av. p. 73 (1854); Burm. Syst. Ueb. ii. p. 167 (1856) (syn. emend.); Sclat. P. Z. S. 1879, p. 821; id. List Vert. An. 8th ed. p. 343 (1883).

Sittace jendaja, part., Wagl. Mon. Psitt. p. 653 (av. jun. and hornot.)

(1832).

Psittacus chrysocephalus (errore), Hahn, Orn. Atl., Papag. p. 79, in

synonymia Psittaci jendayæ (1834).

 Conurus jendaya, part., G. R. Gr. Gen. B. ii. p. 413, n. 10 (1845);
 Souancé, Rev. et Mag. dc Zool. 1856, p. 60 (partim); Bp. Naumannia, 1856, Consp. Psitt. n. 61 (partim); Finsch, Papag. i. p. 495 (partim) (1867); Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 16 (partim) (1873).

Aratinga auricapilla, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 46. Conurus jandaya, part., G. R. Gr. List Psitt. Brit. Mus. p. 36 (1859); Sclat. Cat. Am. B. p. 347, n. 2072 (1862); Schleg. Mus. P.-B. Psittaci, p. 18 (partim et syn. emend.) (1864); G. R. Gr. Hand-list, p. 147, n. 8110 (partim) (1870).

Conurus jendaya, var. meridionalis, Pelz. Orn. Bras. pp. 257, 456,

lii (1871).

Conurus pyrocephalus, part., Rehnw. Journ. f. Orn. 1881, p. 279 (Consp. Psitt. p. 167).

Adult. Very much like C. jendaya, from which it differs in having only the front part of the pileum yellow; the occiput and hind neck green; the sides of the head green, more or less tinged with yellow; a red tinge round the naked periocular region and on the ear-coverts; throat and upper breast green; rest of the breast and abdomen red, showing more or less the green bases of the feathers. Size of C. jendaya.

Young. Differs from the adult in having no red edges, or scarcely any, to the feathers of the lower back and rump, the cheeks deeper and purer green, the red on the lower parts confined to the sides

and to the abdomen.

Hab. Eastern Brazil.

<ul> <li>a. Ad. st.</li> <li>b. Ad. sk.</li> <li>c. Ad. sk.</li> <li>d-f. Ad. sk.</li> </ul>	S. America. Brazil. Bahia (Wucherer). Bahia (Wucherer).	Purchased. Salvin-Godman Coll. Sclater Coll. Salvin-Godman Coll.
y. Ad. sk.	Pelotas, Rio Grande do	Salvin-Godman Coll.
h. Imm. sk. i, k. Ad. sk.	Sul, Brazil (Joyner). S.E. Brazil. [Upper Amazons.]	Sclater Coll. R. Bowdler Sharpe, Esq., LL.D. [P.].
l. & ad. sk.	S. America.	Zool. Soc. Coll.

# 7. Conurus nenday.

Nenday, Azara, Apunt. Hist. Nat. Parag. p. 422, n. 279 (1803); id. Voy. (ed. Sonn.) iii. p. 62 (1809).

Psittacus melanocephalus, Vieill. (nec Lath.) N. D. xxv. p. 366 (1817).

Hooded Parrot, var. A, Lath. Gen. Hist. ii. p. 258 (1822). Psittacus nenday, Vieill. Enc. Méth. iii. p. 1400 (1823); Desm. Dict. Sc. Nat. xxxix. p. 124 (1826).

Sittace nenday, Wagl. Mon. Psitt. p. 646 (1832). Psittacara nanday, Bourj. Perr. pl. 20. (1837-38).

Conurus nenday, G. R. Gr. Gen. B. ii. p. 413, n. 19 (1845); Hartl. Index Azara Apunt. p. 18 (1847).

Conurus armillaris, Licht. Nomencl. Av. p. 73 (1854); Rehnw. Vogelbild. t. xxii. f. 5 (1878-83); id. Journ. f. Orn. 1879, p. 212, 1881, p. 272 (Consp. Psitt. p. 160).

Nandayus melanocephalus, Ep. Rev. et Mag. de Zool. 1854, p. 150, n. 30; Souancé, Rev. et Mag. de Zool. 1856, p. 60; Ep. Nau-

mannia, 1856, Consp. Psitt. n. 31.

Conurus nanday, G. R. Gr. List Psitt. Brit. Mus. p. 35 (1859);
Sclat. Cat. Am. B. p. 347, n. 2071 (1862); Schleg. Mus. P.-B.
Psittaci, p. 10 (1864); Finsch, Papag. i. p. 489 (1867); Gieb. Thes.
Orn. i. p. 765 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 112,
n. 14 (1873); Schleg. Mus. P.-B. Psittaci, Revue, p. 3 (1874);
Garrod, P. Z. S. 1874, p. 587; Burm. P. Z. S. 1878, p. 77; Sclat.
List Vert. An. 8th ed. p. 342 (1883); Berl. Journ. f. Orn. 1887,
p. 121.

Psittacus armillaris, Ill., fide G. R. Gr. List Psitt. Brit. Mus. p. 35

(1859).

Nandayus nanday, G. R. Gr. Hand-list, ii. p. 147, n. 8106 (1870).

Conurus nandaya, Selat. P. Z. S. 1870, p. 383.

Conurus melanocephalus, Rehnw. Journ. f. Orn. 1881, p. 280 (Consp. Psitt. p. 168).

Adult. Green; lower back, rump, breast, abdomen, and smaller under wing-coverts yellowish green; head and chin blackish brown; lower part of the throat washed with blue; thighs red; bastard wing and primary-coverts blue, edged with green on the outer web; primaries blue, with the outer web green; secondaries blue, the tertials green on the outer web; quills underneath and greater under wing-coverts blackish; tail above olive-green, blue towards the tip, underneath blackish; bill horn-brown; feet and iris brown. Total length about 12 inches, wing 7·3, tail 6, bill 0·95, tarsus 0·6.

Young. Duller. Hab. Paraguay.

a. Ad. st.b. Ad. sk.

Paraguay.
[Buenos Ayres.]

Purchased. Sclater Coll.

# 8. Conurus weddelli.

Conurus weddelhi, Deville, Rev. et Mag. de Zool. 1851, p. 209; Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 41; Souancé, Rev. et Mag. de Zool. 1856, p. 61; Bp. Naumannia, 1856, Consp. Psitt. n. 61; Souancé, Icon. Perr. pl. xiii. (1857); Sclat. P. Z. S. 1858, p. 76; G. R. Gr. List Psitt. Brit. Mus. p. 39 (1859); Schleg. Mus. P.-B. Psittaci, p. 10 (1864); Sclat. § Salv. P. Z. S. 1866, p. 197; Finsch, Papag. i. p. 467 (1862); Sousa, Mus. Nac. Lisboa, Psittaci, p. 8 (1869); G. R. Gr. Hand-list, ii. p. 148, n. 8118 (1870); Pelz. Orn. Bras. pp. 258, 446, lii (1871); Gieb. Thes. Orn. i. p. 767 (1872); Sclat. § Salv. P. Z. S. 1873, p. 299; iid. Nomencl. Av. Neotrop. p. 112, n. 17 (1873); Schleg. Mus. P.-B. Psittaci, Revue, p. 3 (1874); Sclat. P. Z. S. 1879, p. 635; Rchnw. Journ. f. Orn. 1881, p. 281 (Consp. Psitt. p. 169); Pelz. Verh. z.-b. Ges. 1882, p. 448; Rchnw. Vogelbild. Nachtr. 84 (1883); Tacz. Orn. Pér. iii. p. 200, Tabl. p. 99 (1886); Allen, Bull. Am. Mus. Nat. Hist. ii. p. 104 (1889); Garlepp, Journ. f. Orn. 1889, p. 291; Berlepsch, Journ. f. Orn. 1889, p. 314.

Maracana weddelli, O. Des Murs, in Casteln. Expéd. Am. du Sud, Ois. p. 13, pl. 2 (1855); Hartl. Journ. f. Orn. 1857, p. 42.

Conurus poliocephalus, Natt. MS., fide Finsch, Papag. i. p. 498 (1867).

Psittacus senex, Natt. Cat. MS. antea, et

Sittace poliocephala, Natt. Cat. MS., fide Pelz. Orn. Bras. p. 258 (1871).

Adult male. Green, with a slight olive tinge on the upper parts; head greyish brown, with the tips of the feathers dull blue; throat and upper breast green, with bluish reflections; lower breast, abdomen, and under wing-coverts yellowish green; under tail-coverts green; quills deep blue, the primaries green towards the base of the outer webs; first primary black, edged with blue on the outer web; bastard wing and primary-coverts deep blue; greater under wing-coverts blackish, slightly edged with bluish or green; tail above blue, with the base of the feathers green, the outer ones blue, with scarcely any green; quills and tail underneath blackish: bill horn-brown; feet dusky; naked skin round the eyes pale. Total length about 12 inches, wing 5.5, tail 4, bill 0.85, tarsus 0.52.

Female. Like the male.

Hab. Interior of Brazil, Ecuador, Eastern Peru and Bolivia.

a. Ad. sk.	Pernambuco, Brazil (Craven).	Sclater Coll.
b. Ad. sk.	Eng. do Gama, Brazil, July (Natterer).	Sclater Coll.
c. ♂ ad. sk.	Eng. do Gama, Brazil, July (Natterer).	Salvin-Godman Coll.
d, e. Ad. sk.	Sarayacu, Ecuador (Buckley).	Salvin-Godman Coll.
$f, g, \beta \Leftrightarrow ad.$	Elvira, E. Peru, Dec. (Haux-well).	Salvin-Godman Coll.
h. Ad. sk.	Peru.	Purchased.
i. Ad. sk.	Bolivia.	C. Bridges [C.].

### 9. Conurus mitratus.

Conurus mitratus, Tsch. Wiegm. Archiv, 1844, p. 304, n. 258; id. Faun. Per., Aves, p. 271, t. xxvi. f. 2 (1844); G. R. Gr. Gen. B. ii. p. 414, n. 38 (1845); Lafr. Rev. et Mag. de Zool. 1849, p. 243; Hartl. Rev. et Mag. de Zool. 1849, p. 274; G. R. Gr. List Psit. Brit. Mus. p. 34 (1859); Finsch, Papag. i. p. 461 (1867); Gieb. Thes. Orn. i. p. 764 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 7 (1873); Tacz. P. Z. S. 1874, p. 549; Sclat. & Salv. P. Z. S. 1879, p. 635; Tacz. P. Z. S. 1880, p. 211; Rehnw. Journ. f. Orn. 1881, p. 273 (Consp. Psitt. p. 161); id. Vogelbild. text of pl. xxii. fig. 7 (1883); Tacz. Orn. Pér. iii. p. 193, Tabl. p. 90 (1886); Sclat. Argent. Orn. ii. p. 43 (1889).

Psittacara mitrata, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 24; Souancé, Rev. et Mag. de Zool. 1856, p. 59; Sousa, Mus. Nac.

Lisboa, Psittaci, p. 8 (1869).

Evopsitta mitrata, Bp. Naumannia, 1856, Consp. Psitt. n. 20; Souaneé, Icon. Perr. pl. xxi. (1857); G. R. Gr. Hand-list, ii. p. 146, n. 8101 (1870).

Conurus hilaris, Burm. Journ. f. Orn. 1860, p. 243 (descr.falsa); id. La-Plata Reise, ii. p. 442 (1861); Finsch, Papag. i. p. 404 (1867); i. Skeleton.

Burm. P. Z. S. 1878, p. 75; id. Wiegm. Arch. 1872, pt. 1, p. 100; Rehnw. Vogelbild. text of pl. xxii. f. 7 (1883). Evopsitta hilaris, G. R. Gr. Hand-list, ii. p. 146, n. 8104 (1820).

Adult male. Green; forehead dark red; sinciput, lores, periocular region, and more or less the cheeks and sometimes also part of the ear-coverts, red; scattered red feathers are to be found sometimes on the head, neck, chin, bend of the wings, thighs, upper tail-coverts, and underparts; greater under wing-coverts, quills, and tail underneath olive, dusky towards the tips of the feathers; first quill washed with bluish on the outer web: bill whitish; feet yellowish brown; iris orange-yellow, with an inner circle grey. Total length about 15 inches, wing 8 to 7.7, tail 7.2, bill 1.3, tarsus 0.6.

Female. Like the male, only smaller.

An apparently young bird has scarcely any red below the eyes. Hab. Peru, Bolivia, and Tucuman.

7 A 3 . T	O D-1' ' (D-11 )	G-1 :- G-1 G-11
a, b. Ad. sk.	Consata, Bolivia (Buckley).	Salvin-Godman Coll.
c. Ad. sk.	Bolivia.	C. Bridges [C.]
d. Ad. sk.	Bolivia ( <i>Bridges</i> ).	Sclater Coll.
c. Ad. sk.	Bolivian Andes.	Pentland, Esq. [P.].
f. Ad. sk.	Cordova (Schuetz).	Sclater Coll.
g, h. 3 ad. et	Tucuman (Burmeister).	Sclater Coll.
ad. sk.	· · · · · · · · · · · · · · · · · · ·	

#### 10. Conurus rubrolarvatus.

Psittacara (Psittacus) erythrogenys, Less. Echo du Monde Savant,

1844, p. 486; id. Descr. Manun. et Ois. p. 188 (1847). Conurus rubrolarvatus, Mass. & Souancé, Rev. et Mag. de Zool. 1854, p. 71; Rehnw. Journ. f. Orn. 1881, p. 275 (Consp. Psitt. p. 163).

Psittacara rubrilarvata, Bp. Rev. et Mag. de Zool. 1854, pp. 147, 150,

Psittacara erythrogenys, Souancé, Rev. et Mag. de Zool. 1856, p. 59.

Evopsitta erythrogenys, Bp. Naumannia, 1856, Consp. Psitt. n. 27; Souancé, Icon. Perr. pl. xxii. (1857); G. R. Gr. Hund-list, ii. p. 146, n. 8102 (1870).

Conurus erythrogenys, G. R. Gr. List Psitt. Brit. Mus. p. 34 (1859) (nec Less. Tr. d'Orn. p. 215, 1831); Sclat. P. Z. S 1859, p. 146, 1860, pp. 71, 287; id. Cat. Am. B. p. 347, n. 2068 (1862); Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xv (1863); Schley. Mus. P.-B. Psittaci, p. 12 (1864); Finsch, Papag. ii. p. 465 (1867); Gieb. Thes. Orn. i. p. 762 (1872); Sclat. & Salv. Nomenel. Av. Neotrop. p. 112, n. 10 (1873); Schleg. Mus. P.-B. Psittaci, Revue, p. 3 (1874); Tacz. P. Z. S. 1877, p. 328; Rchnw. Vogelbild. text of pl. xxii. f. 4 (1878-83); Salv. P. Z. S. 1883, p. 426; Berl. & Tacz. P. Z. S. 1883, p. 573; Sclat. List Vert. An. 8th ed. p. 342 (1883); Tacz. & Berl. P. Z. S. 1885, p. 122; Tacz. Orn. Pér. iii. p. 198, Tabl. p. 99 (1886).

Adult male. Green, underparts a little paler; nearly the whole of the head, including the cheeks, the region round the eyes, and

chin, red; edge and bend of the wing, carpal edge, under wingcoverts, and thighs also red; greater under wing-coverts, quills, and tail-feathers underneath olive, the quills towards the tip and on the outer web dusky: bill yellowish white; naked skin round the eyes pale yellow; irides yellow. Total length 13.5 inches, wing 6.9, tail 6.8, bill 1.03, tarsus 0.65.

Young. Differs from the adult in having the red of the head much reduced and confined to the sinciput and to a few spots on the cheeks; also on the wings there is much less red, only a few feathers along the edge of the wing and the middle under wingcoverts being stained with red.

Hab. Ecuador and Peru.

a-c. Ad. sk. Payta, Peru, Jan. (Markham). Salvin-Godman Coll. d. Ad. st. Guayaquil. Massena Coll. (Type of the species.) e. Ad. sk. Pallatanga, Ecuador (Fraser). Sclater Coll. f. Ad. sk. Intaj, Ecuador (Buckley). Salvin-Godman Coll. Balzar Mountains, Ecuador g. Imm. sk. Salvin-Godman Coll. (Illingworth). h. Skeleton. Guayaquil.

### 11. Conurus frontatus.

Comurus frontatus, Cab. in Tsch. Faun. Per. p. 272 (note) (1844) (nec Psittacara frontata, Viy. 1825); Lafr. Rev. et Mag. de Zool. (nec l'sittacara trontata, Fig. 1822); Lafr. Rev. et Mag. de Zool. 1849, p. 243; G. R. Gr. List Psitt. Brit. Mus. p. 34 (1859); Finsch, Papag. i. p. 462 (1867); Salv. Ibis, 1871, p. 92; Gieb. Thes. Orn. i. p. 762 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 8 (1873); Rchnw. Vogelbild. t. xxii. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 274 (Consp. Psitt. p. 162); Tacz. Orn. Pér. iii. p. 197, Tabl. p. 99 (1886).

? Arara prasina, Lees. Echo du Monde Savant, 1844, p. 127; id.

Descr. Mamm. et Ois, p. 190 (1847).

Evopsitta frontata, Bp. Naumannia, 1856, Consp. Psitt. n. 20; 
G. R. Gr. Hand-list, ii. p. 146, n. 8103 (1870).

Conurus rubrifrons, Natt. MS. in Mus. Vindob. (fide Finsch, l. c.)\*.

Adult male. Green, underparts paler, with the shafts of the feathers black; forehead, crown, lores, edge and bend of the wings,

the lower part of the carpal edge, and thighs scarlet; greater under wing-coverts, quills, and tail-feathers olive, the quills dusky towards the tip; tail above green, the two central feathers washed with blue towards the tip: bill yellowish white; feet greyish. Total length about 15.5 inches, wing 8.3, tail 7.6, bill 1.2; tarsus 0.7.

Hab. Peru and Ecuador.

a. Ad. sk. San José, Ecuador (Buckley). Salvin-Godman Coll. b, c. Ad. sk. San Lucas, Ecuador (Buckley). Salvin-Godman Coll. d. Ad. sk. Lima, Peru (Nation). Sclater Coll.

<sup>\*</sup> Perhaps also the following synonyms belong to the present species:-Psittaeus Iunatus, Bechst. Lath. Ueb. p. 82, n. 88 (1811); id. Abbild, naturh. Gegenstände, viii. t. 94 (1793–1809); Kahl, Consp. p. 36 (1820). Eos cervicalis, Wagl. (ncc Lath.) Mon. Psitt. p. 561 (syn. emend.) (1832). Trichoglossus cervicalis (part.), G. R. Gr. List Psitt. Brit. Mus. p. 62 (1859).

#### 12. Conurus finschi.

Conurus finschi, Salv. Ilis, 1871, p. 91, pl. iv.; Gieb. Thes. Orn. i. p. 762 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 9 (1873); Rchnw. Journ. f. Orn. 1881, p. 274 (Consp. Psitt. p. 162); id. Vogelbild. text of pl. xxii. f. 7 (1883); Zeled. Pr. U. S. Nat. Mus. viii. p. 111 (Costa Rica) (1885).

Adult male (type). Green, a little paler below; forehead and anterior part of the crown red; carpal edge and outermost under wing-coverts red, with an orange tinge, the bases of the feathers being yellow; the greater under wing-coverts yellow, but some of them, as well as the under surface of the quills and tail-feathers olive, the quills dusky towards the tip and on the outer web; some of the tibial feathers red; innermost under wing-coverts green: bill yellowish white; feet dusky. Total length 11·3 inches, wing 6·2, tail 5·2, bill 0·95, tarsus 0·43.

Young male. A few scattered red feathers on the forehead; bend of the wing and carpal edge green; only the median under wing-coverts red, the greater ones dusky olive.

Hab. Veragua, on the southern slope of the volcano of Chiriqui,

and Costa Rica.

Two out of the three specimens examined seem adult, although perhaps not fully so, as in neither are all the greater under wingcoverts yellow, some of them being dusky olive, the remains of immaturity.

This species differs from *C. frontatus* not only in its smaller size, but also and principally in the red of the forehead not reaching the eyes, so that the lores are red near the nostrils and green near the eyes, exactly as in *C. wagleri*; it approaches *C. leucophthalmus* in its yellow greater under wing-coverts.

a, b. d ad. et juv. sk.
c. d ad. sk.
Bugaba, Chiriqui (Arcé).
Bugaba, Chiriqui (Arcé).

Salvin-Godman Coll. (Types of the species). Sclater Coll.

# 13. Conurus wagleri.

Conurus wagleri, G. R. Gr. Gen. B. ii. p. 413, n. 4, pl. cii. (1845); Hartl. Rev. et Mag. de Zool. 1850, p. 158; Sclat. P. Z. S. 1855, p. 162; G. R. Gr. List Psitt. Brit. Mus. p. 34 (1859); Sclat. Cat. Am. B. p. 347, n. 2067 (1862); Schleg. Mus. P.-B. Psittaci, p. 12 (1864); Finsch, Papag. i. p. 459 (1867); Sclat. § Salv. P. Z. S. 1868, p. 169; Wyatt, Ibis, 1871, p. 381; Gieb. Thes. Orn. i. p. 767 (1872); Scl. § Salv. Nomencl. Av. Neotrop. p. 111, n. 6 (1873); Sclat. P. Z. S. 1873, p. 803; Schleg. Mus. P.-B. Psittaci, Revue, p. 3 (1874); Sclat. § Salv. Ibis, 1879, p. 206; Sclat. § Salv. P. Z. S. 1879, p. 538; Rehnw. Vogelbild. t. xxii. f. 4 (red collar) (1878–83); id. Journ. f. Orn. 1881, p. 274 (Consp. Psitt. p. 162); Sclat. List Vert. An. 8th ed. p. 342 (1883); Berl. Journ. f. Orn. 1884, p. 319.

Conurus erythrochlorus, Hartl. Rev. et Mag. de Zool. 1849, p. 274,

1850, p. 158; Licht. Nomencl. Ar. p. 73 (1854).

Psittacara wagleri, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 21; Souancé, Rev. et Mag. de Zool. 1856, p. 59; Sousa, Mus. Nac. Lisbou, Psittaci, p. 8 (1869). Evopsitta wagleri, *Bp. Naumannia*, 1856, *Consp. Psitt.* no. 25; *Souancé*, *Icon. Perr.* pl. xx. (1857); *G. R. Gr. Hand-list*, ii. p. 146, n. 8100 (1870).

Psittacus gnathó, Licht. in Mus. Berol. (fide G. R. Gr. List Psitt. Brit. Mus. p. 34; Finsch, Papag. i. p. 459).

Adult male. Green, underparts a little paler; forehead and crown red; sometimes a red band, or only some red feathers, across the throat; no red colour on the edge of the wing, or on the under wing-coverts, which are green; greater under wing-coverts, under surface of quills and of the tail-feathers olive: bill yellowish white; feet dusky; irides yellow. Total length about 14 inches, wing 7, tail 6, bill 1.05, tarsus 0.65.

Hab. Venezuela and Colombia.

<ul><li>a. Ad. sp.</li><li>b. Ad. sk.</li></ul>	Sante Fé de Bogota.	Purchased. (Types of the species.)
c. Ad. sk.	Bogota.	Sclater Coll.
d. Ad. sk.	Bogota (Crowther).	Salvin-Godman Coll.
e. Ad. sk.	Attanques, Santa Marta (F. Simons).	Salvin-Godman Coll.
f. Ad. sk.	Medellin, U.S. of Colombia (Salmon).	Sclater Coll.
g. Ad. sk.	Medellin, U.S. of Colombia (Salmon).	Salvin-Godman Coll.
h. Ad. sk.	New Granada.	Purchased.
i. Ad. sk.	Venezuela.	Purchased.
k. Ad. sk.	Venezuela.	Massena Coll.
l. Ad. sk.	Venezuela (Goering).	Salvin-Godman Coll.

# 14. Conurus euops.

Psittaca Aquarum Lupiarum Insulæ, *Briss. Orn.* iv. p. 330 (partim) (1760).

Long-tailed green Parrakeet, var. A, Guiane green Parrakeet, Lath. Syn. i. p. 231 (1781); id. Gen. Hist. ii. p. 154 (1822).

Psittacus rufirostris, var.  $\beta$ . gujanensis, Gm. S. N. i. p. 323 (1788). Psittacus rufirostris, var.  $\beta$ , Lath. Ind. Orn. i. p. 96 (1790).

Psittacus rufirostris, var. β, Lath. Ind. Orn. i. p. 96 (1790). Sittace euops, Wayl. Mon. Psitt. p. 638, t. xxiv. f. 2 (1832). Psittacus euops, Hahn, Orn. Atl., Papag. p. 95, t. 74 (1840).

Conurus guianensis, D'Orb. (nec Gm.) in La Sagra's Hist. Nat. Cuba,
 Ois. p. 162 (1840); Lemb. Aves Cuba, p. 132 (1850); Cab. & Gundl.
 Journ. f. Orn. 1856, p. 106; Selat. P. Z. S. 1857, p. 225; Brewer,
 Proc. Bost. Soc. Nat. Hist. vii. p. 306 (1860); Gundl. Journ. f.

Orn. 1861, pp. 336, 416.

Conurus euops, G. R. Gr. Gen. B. ii. p. 414, n. 26 (1845); id. List Psitt. Brit. Mus. p. 33 (partim) (1859); Finsch, Papag. i. p. 474 (1867); Gundl. Journ. f. Orn. 1871, pp. 271, 277, 288, 291, 293; Scl. & Salv. Nomencl. Av. Neotrop. p. 112, n. 13 (1873); Gundl. Journ. f. Orn. 1874, p. 164; id. Contr. Orn. Cub. pp. 126, 276 (1876); Cab. Journ. f. Orn. 1881, p. 107; Rehnw. Journ. f. Orn. 1881, p. 275 (Consp. Psitt. p. 163), 1882, p. 11; id. Vogelbild. Nachtr. 79 (1883); Tristr. Ibis, 1884, p. 168; Cory, List Birds W. I. p. 20 (1885); id. Auk, 1886, p. 455 (with figure of the head); id. B. of W. Ind. p. 178 (1889); Marsh. Papag. p. 55 (1889).

Evopsitta euops, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 77; id. Naumannia, 1886, Consp. Psitt. n. 24.

Naumannia, 1886, Consp. Psitt. n. 24. Psittacara euops, Souancé, Rev. et May. de Zool. 1856, p. 59. Evopsitta typus, Bp., fide Bp. Naumamia, l. c. in syn. n. 24.

Evopsitta euops, *Souance*, *Icon. Perr.* pl. vii. f. 1 (nec f. 2) (1857), and in the text of pl. viii. (partim) (1857); *G. R. Gr. Hand-list*, ii. p. 146, n. 8099 (1870) (partim).

Conurus evops, Gundl. Repert. Fisico-Nat. Cuba, i. p. 297 (1866); id. Journ. f. Orn. 1874, p. 164; id. Anal. Soc. Esp. Hist. Nat. viii. p. 229 (1878).

? Conurus similis, Natt. MS. in Mus. Vindob., fide Finsch, l. c.

Conurus enops (errore), Sclat. P. Z. S. 1886, p. 539.

Adult male. Green, underparts a little lighter; head and neek dotted here and there with red; also the thighs often with some red feathers; whole of the smaller under wing-coverts and the carpal edge red; greater under wing-coverts, quills, and tail-feathers below olive, the quills dusky towards the tips: bare skin round the eyes bluish white: "bill whitish flesh-colour; feet pale flesh-colour; iris white-yellow" (Finsch). Total length about 10.5 inches, wing 5.2, tail 5, bill 0.8, tarsus 0.53.

Hab. Cuba.

a. Z ad. sk.b. Ad. sk.

Cuba, Jan. (C. Wright). Cuba (C. Wright). Smithsoniau Inst. [P.]. Sclater Coll.

### 15. Conurus chloropterus.

Psittacara chloroptera, Sonuncé, Rev. et Mag. de Zool. 1856, p. 59; id. Icon. Perr. text of pl. vii. (1857).

Evopsitta chloroptera, Ep. Naumaunia, 1856, Consp. Psitt. n. 23. Evopsitta euops, part., Souancé, Icon. Perr. pl. vii. f. 2 (upper

figure) (1857).

Conurus chloropterus, Sclat. P. Z. S. 1857, p. 225; Sclat. & Salv. P. Z. S. 1857, p. 234; Cory, Birds Haiti & San Domingo, p. 113, pl. 15 (1885); id. List Birds W. I. p. 20 (1885); Cab. Journ. f. Orn. 1885, p. 222; Cory, Auk, 1886, p. 459; id. Birds W. Ind. p. 180 (1889).

Conurus euops, part., G. R. Gr. List Psitt. Brit. Mus. p. 33 (1859). Psittacus (Conurus) chloropterus, Bryant, Pr. Bost. Soc. Nat. Hist. xi. p. 96 (1866).

Conurus pavua, part., Finsch, Papag. i. p. 469 (1867).

Conurus leucophthalmus, part., G. R. Gr. Hand-list, ii. p. 145 n. 8090 (1870); Rehnw. Journ. f. Orn. 1881, p. 276 (Consp. Psitt. p. 164).

Conurus paona (err.), Marsh. Papag. p. 55 (1889).

Adult male. Very much like *C. euops*, from which it differs in being larger, in having the general colonr a purer green, especially on the underparts, and in the red colour of the under wing-coverts being brighter and extended also to the bend of the wing. Total length 12:5 inches, wing 6:7, tail 6, bill 1, tarsus 0:6.

Young. Differs from the adult in having the median under wing-coverts washed with pale red, and the smaller ones green, edged with red; no red colour on the bend of the wing, which is green.

Hab. San Domingo.

a. Ad. sk. San Domingo. Massena Coll. (Type of species.) b. Juv. st. Massena Coll. San Domingo. San Domingo (Toogood). Samana, San Domingo, May c. Ad. sk. Sclater Coll. d. ♀ ad. sk. Salvin-Godman Coll. (M. A. Frazar: Cory Coll.) e, f. 2 ad. sk. Samana, San Domingo, April Salvin-Godman Coll. (C. B. Cory). g. Ad. st. Tropical America. Massena Coll. h. Juv. st. Purchased.

## 16. Conurus leucophthalmus.

Psittaca guianensis, *Briss. Orn.* iv. p. 332, pl. xxviii. f. 1 (1760). Perruche de la Guiana, *D'Aubent. Pl. Enl.* 167 et 407. Psittacus leucophthalmus, Mill. S. N. Suppl. p. 75, 6 h (1776) (ex Pl. Enl. 407); Cass. Pr. Ac. Phil. 1864, p. 239.

Psittacus notatus, Müll. S. N. Suppl. p. 75, 6 k (1776) (ex Pl. Enl.

167); Cass. Pr. Ac. Phil. 1864, p. 239. Perriche Pavouane, Buff. Hist. Nat. Ois. vi. p. 255 (1779).

Pavouane Parrot, *Lath. Syn.* i. p. 232, n. 34 (1781); id. Gen. Hist. ii. p. 155 (1822).

Psittacus pavua, Bodd. Tabl. Pl. Enl. p. 10 (1783).

Psittacus gujanensis, Gm. S. N. i. p. 324, n. 70 (1788); Lath. Ind. Orn. i. p. 96, n. 41 (1790); Shaw, Gen. Zool. viii. 2, p. 402 (1811); Bechst. Lath. Ueb. p. 73 (1811–12); Vieill. N. D. xxy. p. 367 (1817); Kuhl, Consp. Psitt. p. 19 (partim) (1820); Neuwied, Reise, i. p. 52, ii. p. 341 (1820); Vieill. Enc. Méth. iii. p. 1401 (1823); Voigt, Cuv. Uebers. p. 725 (1831); Neuwied, Beitr. iv. p. 169 (1832); Hahn, Orn. Atl., Papag. p. 44, t. 30 (1835); Thienem. Fortpflanz. d. ges. Vög. p. 75, t. xiv. f. 6 (egg) (1846).
Perruche Ara pavouane, Levaill. Perr. pls. 14, 15 (1801).
Maracana verde, Azara, Apunt. Hist. Nat. Parag. i. p. 415, n. 275

(1802).

Maracana verd, Azaru, Voy. (ed. Sonn.), iii. p. 57 (1809). Aratinga nobilis sive guianensis, Spix, Av. Bras. i. p. 36 (1824).

Psittacara guianensis, Vig. Zool. Journ. ii. p. 389 (1825); Steph. Gen. Zool. xiv. p. 115 (1826); Ep. Rev. et May. de Zool. 1854, p. 150, n. 20; Souancé, Rev. et Mag. de Zool. 1856, p. 59; Sousa, Mus. Nac. Lisboa, Psittaci, p. 7 (1869).

Arara cajana, Less. Tr. d'Orn. p. 188 (1831).

Sittace gujanensis, Wagl. Mon. Psitt. p. 660 (1832); Hartl. Syst. Verz. Ges. Mus. p. 86 (1844).

Conurus pavua, G. R. Gr. Gen. B. ii. p. 413, n. 3 (1845); Hartl.
Ind. Azar. Apunt. p. 17 (1847); G. R. Gr. List Psitt. Brit. Mus.
p. 31 (1859); Sclut. Cat. Am. B. p. 346, n. 2004 (1862); Finsch, Papag. i. p. 470 (1867); Pelz. Orn. Bras. pp. 256, 446, lii (1871); Tajag. 1. p. 440 (1607); Fetz. Orn. Bras. pp. 250, 446, ft (1811); Gieb. Thes. Orn. i. p. 765 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 12 (1873); iid. P. Z. S. 1873, p. 299; Garrod, P. Z. S. 1874, p. 587; Cab. Journ. f. Orn. 1881, p. 107; Sclat. List Vert. An. 8th ed. p. 341 (1883); Berl. & Jhering, Zeitschr. f. ges. Orn. 1885, p. 163; Salvin, Ibis, 1886, p. 67; Berl. Journ. f. Orn. 1887, pp. 25, 121; Allen, Bull. Am. Mus. Nat. Hist. ii. p. 104 (1889); Garlepp, Journ. f. Orn. 1889, p. 291; Berl. Journ. f. Orn. 1889, p. 314.

Conurus cayanensis, G. R. Gr. Gen. B., App. p. 19 (1849). Conurus guianensis, Cab. in Schomb. Reise, iii. p. 729 (1848); Burm. Syst. Ueb. ii. p. 164 (1856); Sclat. P. Z. S. 1857, p. 266; Schleg. Dierent. p. 81 (1864); id. Mus. P.-B. Psittaci, p. 12 (1864); id. op. cit. Revue, p. 4 (1874); Tacz. Orn. Pér. iii. p. 199, Tabl. p. 99 (1886).

Aratinga nobilis, Brehm, Monogr. d. Papag. t. 27 (var.) (1852). Maracana guianensis, O. Des Murs, in Casteln. Exp. Am. Sud, Ois. p. 15 (1855); Hartl. Journ. f. Orn. 1857, p. 42.

Evopsitta guianensis, Bp. Navmannia, 1856, Consp. Psitt. n. 21;

Souancé, Icon. Perr. in the text of pl. viii. (1857).

Conurus propinguus, Selat. Cat. Am. B. p. 346, n. 2065 (1862) (S.E. Brazil); Cab. Journ. f. Orn. 1874, p. 228 (Cantagallo), 1881, p. 107, 1885, p. 222.

Conurus leucophthalmus, G. R. Gr. Hand-list, ii. p. 145, n. 8090 (1870); Rehnw. Journ. f. Orn. 1881, p. 276 (Consp. Psitt. p. 164);

id. Vogelbild. Nachtr. 80 (1883).

Adult male. Green, underparts a little paler; bend of the wing, carpal edge, and smaller under wing-coverts red; greater under wing-coverts yellow; quills and under tail-coverts golden olive, the quills dusky towards the tips and on the outer webs: bill yellowish flesh-colour; naked skin round the eyes ashy flesh-colour; feet Total length 13.5 inches, wing 6.9, tail 6.5, bill 1.05, dusky. tarsus 0.6.

Young. Has the bend of the wing green and the carpal edge vellowish; median under wing-coverts washed with pale red, the smaller green edged with pale red, and the greater ones olive edged with vellow.

Hab. Guiana, Trinidad, and Colombia, and through the Amazon

Valley to Eastern Peru, Bolivia, and Brazil.

a. Ad. st. Bogota. Massena Coll. b. Juv. sk. Yquitos, Peru (Whitely). Sclater Coll. Borba, Brazil, Dec. (Natterer). Salvin-Godman Coll. c. ♂ ad. sk. d. Ad. sk. Purchased. Guiana. Sclater Coll. e. Ad. sk. f. Ad. sk. British Guiana. Geographical Society [P.]. Chapada, Mattogrosso, Brazil, Salvin-Godman Coll.  $y \in \mathcal{J}$  ad.; h-k. ♀ ad. et juv. Feb., March, Aug., Sept. (H. H. Smith). l. Juv. sk. Mattogrosso, Brazil (H. H. Salvin-Godman Coll. Smith). Bolivia. m. Ad. st. Bridges Coll. Bahia, Brazil (Wucherer). Salvin-Godman Coll. *n*, *o*. Ad. sk. Pelotas, Rio Grande do Sul, Salvin-Godman Coll. p. ♂ ad. sk. Brazil (Joyner). Sclater Coll. (Type q. Ad. sk. Brazil. of C. propinguus, Sclat.)

# 17. Conurus callogenys.

Adult. Similar to C. leucophthalmus, but much larger, of a darker green, and constantly with red patches on the lower part of the cheeks. Total length about 14.5 inches, wing 7.6, tail 6.5, bill 1.25, tarsus 0.65.

Young. No red patches on the lower part of the cheeks. Hab. Eastern Ecuador.

a. Ad. sk. Jima, Ecuador (Buckley). Salvin-Godman Coll. b, c. Ad. sk. Sarayacu, Ecuador (Buckley). Salvin-Godman Coll. ( (Types of the species.)

Santa Cruz, Peruvian Ama-E. Bartlett [C.].  $d. \ \mathcal{J} \ \mathrm{ad.}; \ e, f.$ ♀ juv. sk. zons, May.

### 18. Conurus maugei.

Psittacara maugei, Souancé, Rev. et Mag. de Zool. 1856, p. 59; Cab. Journ. f. Orn. 1885, p. 222.

Evopsitta maugei, Bp. Naumannia, 1856, Consp. Psitt. n. 22; Souancé, Icon. Perr. pl. viii. (1851).
Conurus maugei, Sclat. P. Z. S. 1857, p. 225; G. R. Gr. List Psitt. Brit. Mus. p. 33 (1859); Schleg. Dierent. p. 81 (1864); id. Mus. P.-B. Psittaci, p. 13 (1864); G. R. Gr. Hand-list, ii. p. 145, no. 8091 (1870); Schleg. op. cit. Revue, p. 4 (1874).

Conurus pavua, part., Finsch, Papag. i. p. 469 (1867).

Conurus euops?, Gundl. Journ. f. Orn. 1878, pp. 160, 184; id. Anal. de Hist. Nat. vii. p. 229 (1878).
 Conurus gundlachi, Cab. Orn. Centralbl. vi. n. i. p. 5 (1881); id.

Journ. f. Orn. 1881, p. 107; Salv. & Selat. Ibis, 1881, p. 479; Rehnw. Journ. f. Orn. 1881, p. 275 (Consp. Psitt. p. 163); Gundl. Journ. f. Orn. 1881, p. 401; Rehnw. v. Schal. Journ. f. Orn. 1882, p. 119; Cab. Journ. f. Orn. 1885, p. 222; Cory, Auk, 1886, p. 457; id. Birds W. Ind. p. 180 (1889); Marsh. Papay. p. 55 (1889).

Larger than C. guianensis, from which it differs in having the whole of the under wing-coverts, greater and smaller, red. (Souancé.) Total length about 14.5 inches, wing 7.1, tail 4.7, bill 1.03.

Hab. Porto Rico (?) and Mona Island, between Porto Rico and

St. Domingo.

I have not seen a specimen of this species, of which I have no doubt C. gundlachi, Cab., is a synonym. The type in the Museum of Paris and a second specimen in that of Leyden are the only ones known to exist in museums. Dr. Cabanis described his C. gundlachi only from two wings sent to him by Gundlach for examination. This species differs from all the allied ones principally in having the greater under wing-coverts, as well as the smaller ones, red. Dr. Finsch thought that the specimens referred to C. maugei were adult individuals of C. pavua.

#### 19. Conurus holochlorus.

? Psittacus guianensis, Licht. (ncc Gm.) Preis-Verz. Thiere v. Mexico,

p. 1 (1830); id. Journ. f. Orn. 1863, p. 54.

Conurus holochlorus, Sclat. Ann. & Mag. N. H. (3) iv. p. 224 (1859); id. P. Z. S. 1859, p. 368; Sclat. & Salv. Ibis, 1860, p. 44; Sclat. Cat. Am. B. p. 346, n. 2066 (1862); id. P. Z. S. 1864, p. 177; Schley. Mus. P.-B. Psittaci, p. 13 (1864); Finsch, Papay. i. p. 466 (1867); G. R. Gr. Hand-list, ii. p. 148, n. 8119 (1870); Salv. Ibis, 1871, p. 92; Gieb. Thes. Orn. i. p. 763 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 11 (1873); Schleg. Mns. P.-B. Psittaci, Revue, p. 4 (1874); Garrod, P. Z. S. 1873, pp. 466, 633, 1874, p. 587; Schmidt, P. Z. S. 1880, p. 310; Rehnw. Journ. f. Orn. 1881, p. 276 (Consp. Psitt. p. 164); Salv. Cat. B. Strickl. Coll. p. 465 (1882); Schat. List Vert. An. 8th ed. p. 342 (1883); Rehnw. Vertel hild. Neother 21 (1882); Verten. Rev. U.S. Nat. Mag. vi. Vogel-bild. Nachtr. 81 (1883); Nutting, Pr. U. S. Nat. Mus. vi. p. 395 (Nicaragua) (1883); Ridgw. Man. N. Am. B. p. 270 (1887); Pelz. & Lor. Ann. d. naturhist. Hofmus. iii. p. 38 (1888); Salv. & Godm. Ibis, 1889, p. 241.

Conurus rubritorquis, Selat. P. Z. S. 1886, p. 539, pl. lvi. (var.); Cab. Journ. f. Orn. 1888, p. 100.

Adult. Green, with no red colour whatever; underparts paler; greater under wing-coverts, quills, and tail-feathers underneath olive, the quills dusky towards the tips and on the outer webs: naked skin round the eyes and feet brown flesh-colour; bill yellowish flesh-colour; irides brown. Total length about 12.6 inches, wing 6.9, tail 5.6, bill 1.05, tarsus 0.65.

Hab. Southern Mexico to Nicaragua.

Sometimes scattered red feathers or even a red band across the throat, nearly encircling the neck behind, are to be found. An individual variety of this description is the type of C. rubritorquis, Sclat.

a−e. ♂ ad. sk.	Rio Camache, Nuevo Leon, Mexico, June (F. B. Arm- strong).	Salvin-Godman Coll.
f. d ad. sk.	Sierra Madre, Tamaulipas, Mexico (W. B. Richard- son).	Salvin-Godman Coll.
g. ♂ ad. sk.	Xicotencal, Tamaulipas, Mexico, May (W. B. Richardson).	Salvin-Godman Coll.
h. d ad. sk.	Valles, San Luis Potosi, Mexico, May (W. B. Richardson).	Salvin-Godman Coll.
i. d ad. sk.	Misantla, Mexico, April (F. Ferrari-Perez).	Salvin-Godman Coll.
k. Ad. sk.	Jalapa, Mexico (de Oca).	Sclater Coll. (Type of species.)
<ul><li>l. Ad. sk.</li><li>m. ♂ ad. sk.</li></ul>	Jalapa, Mexico ( <i>C. F. Höge</i> ). Hacienda de Tortugas, Jalapa, Nov. ( <i>F. Ferrari-Perez</i> ).	Salvin-Godman Coll. Salvin-Godman Coll.
n. Ad. sk.	Mexico.	R. B. Sharpe, Esq, LL.D. [P.].
o. 2 ad. sk.	El Rincon, San Marcos, Guatemala, Oct. (W. B. Richardson).	Salvin-Godman Coll.
p. ♀ ad. sk.	Santa Maria de Quezalte- nango, Guatemala, August (W. B. Richardson).	Salvin-Godman Coll.
<i>q−s</i> . Ad. sk.	Dueñas, Guatemala (O. Salvin).	Salvin-Godman Coll.
t. Ad. sk.	Dueñas, Guatemala, Nov. (O. Salvin).	Tweeddale Coll.
u. Ad. sk.	San Gerónimo, Guatemala, May (O. Salvin).	Salvin-Godman Coll.

Sclater Coll. v. Ad. sk. Vera Paz, Guatemala (O. Salvin). x. Ad. sk. Guatemala (O. Salvin). Salvin-Godman Coll. y. Ad. sk. Massena Coll. z. 3 ad. sk. [S. America.] Sclater Coll. (Type of C. rubritorquis.)  $\alpha'$ . Skeleton. Mexico. Zool. Soc. Gardens.

### 20. Conurus brevipes.

Conurus holochlorus, var. brevipes, Baird, Ann. Lyc. N. Y. 1871, p. 54; Lawr. Pr. Bost. Soc. N. H. xiv. p. 298 (1871); id. Mem. Bost. Soc. N. H. ii. p. 295 (1874).

Conurus holochlorus (part.), Rchnw. Journ. f. Orn. 1881, p. 276 (Consp. Psitt. p. 164).

Conurus holochlorus brevipes, Ridgiv. Man. N. Am. B. p. 270 (1887).

About the size of C. holochlorus, Sclat., but with weaker feet and more deeply green lower parts. Total length 12.5 inches, wing 6.6, tail 6, bill 1.1, tarsus 0.62.

Hab. Socorro Island, Western Mexico.

Socorro Island (Col. Grayson). Salvin-Godman Coll. a. Ad. sk.

#### 21. Conurus nanus.

Brown-throated Parrakeet, var., Lath. Syn. i. p. 243 (1781). Psittacara nana, Viy. Zool. Journ. v. p. 273 (1830); Lear, Parr. pl. 12 (1832); Wayl. Mon. Psitt. pp. 640, 741 (1832); Bourj. Perr. pl. 24 (from Lear) (1837-38); Denny, P. Z. S. 1847, p. 38. Conurus nanus, G. R. Gr. Gen. B. ii. p. 414, n. 32 (1845); Bp. Rev. et Mag. de Zool. 1854, p. 150, no. 43; Souancé, Rev. et Mag. de Zool. 1856, p. 61; Bp. Naumannia, 1856, Consp. Psitt. n. 70; Sclat. P. Z. S. 1857, p. 225; Souancé, Icon. Perr. pl. xii. f. 1 (upper fig.) (1857); G. R. Gr. List Psitt. Brit. Mus. p. 39 (1859); Sclat. P. Z. S. 1861, p. 79; id. Cat. Am. B. p. 349, n. 2081 (1862); Albrecht, Journ. f. Orn. 1862, p. 203; March, Pr. Ac. Nat. Sci. Philad. 1863, p. 284; Schleg. Mus. P.-B. Psittaci, p. 14 (1864); Finsch, Papag. i. p. 520 (1867); G. R. Gr. Hand-list, ii. p. 148, n. 8117 (1870); Gieb. Thes. Orn. i. p. 765 (1872); Schleg. Mus. P.-B. Psittaci, Revue, p. 4 (1874); A. § E. Nevt. Handb. Jamaica, p. 110 (1881); Rehum. Jaurn. f. Orn. 1881, p. 280 (Cong. Part. p. 110 (1881); Rehnw. Journ. f. Orn. 1881, p. 280 (Consp. Psitt, p. 168); Salv. Cat. B. Strickl. Coll. p. 466 (1882); Rehnw. Vogelbild. in the text of pl. xxxiii. f. 5 (1883); Cory, List Birds W. Ind. p. 20 (1885); id. Auk, 1886, p. 456; id. Birds W. Ind. p. 179 (1889); Marsh. Papag. p. 55 (1889). Conurus flaviventer, Gosse (nec Spix), B. Jamaica, p. 263 (1847).

Adult male. Entire upper plumage bright green, brighter on rump, cheeks, and ear-coverts; throat and upper breast brown; lower breast and abdomen dull olive; under tail-coverts green; quills blue, the primaries green towards the base of the outer webs and edged with black at the tip, tertials green; bastard-wing and primary-coverts green, slightly tinged with blue towards the tips; smaller under wing-coverts and axillaries light green; greater under

wing-coverts and quills underneath blackish; tail above green, the two central feathers more or less tinged with blue at the tip; tail below golden-olive: bill whitish; feet dusky; iris pale orange. Total length about 10.5 inches, wing 5.7, tail 5.2, bill 0.88, tarsus 0.5.

Female. Like the male. Hab. Jamaica.

Purchased. a. Ad. st. Jamaica. P. H. Gosse [P.]. b, c. Ad. sk. Jamaica. d. ♀ ad. sk. Jamaica (Osburn). Sclater Coll. Spanishtown, Jamaica, March (W. T. March). Institue. 9 ad. sk. Smithsonian tion [P.]. Freeman's Hall, Irclawny, Salvin-Godman Coll. f. of ad. sk. Jamaica, January (Os-

burn).

Jamaica.

g. Sternum and shoulder-girdle.

P. H. Gosse [P.].

### 22. Conurus aztec.

Psittacus pertinax, juv., Licht. Preis-Verz. d. Säugeth. etc. aus Mexico, p. 1 (1830); id. Journ. f. Orn. 1863, p. 54.
Conurus astec, Souancé, Rev. et May. de Zool. 1857, p. 97; Sclat. P. Z. S. 1857, p. 230; Moore, P. Z. S. 1859, p. 59; Sclat. S. Salv. Bis, 1859, p. 137; Sclat. P. Z. S. 1859, p. 388; id. Ann. S. Mag. N. H. (3) iv. p. 224 (1859); Taylor, Ibis, 1860, p. 120; Sclat. S. Salv. P. Z. S. 1867, p. 280, 1870, p. 837; Salv. Ibis, 1872, p. 313; Boucard, P. Z. S. 1878, p. 43; Salv. Ibis, 1889, p. 373, 1890, p. 88.
Conurus aztec, Souancé, Icon. Perr. pl. xii. f. 2 (lower figure) (1857); G. R. Gr. List Psitt. Brit. Mus. p. 38 (1859); Sclat. Cat. Ann. B. p. 349, n. 2080 (1862); Schleg. Mus. P.-B. Psittaci, p. 21 (1864); Lawr. Ann. Lyc. N. Y. viii. p. 184 (1865); Finsch, Papag. i. p. 522 (1867); Sousa, Mus. Nac. Lisboa, p. 9 (1869); Lawr. Ann. Lyc. N. Y. ix. p. 207 (1869); G. R. Gr. Hand-list, ii. p. 147, n. 8112 (1870); Salv. Ibis, 1871, p. 93; Gieb. Thes. Orn. i. p. 760 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 26 (1873); Schleg. Mus. P.-B. Psittaci, Revue, p. 6 (1874); Garrod, P. Z. S. 1874, p. 587; Lawr. Bull. U. S. Nat. Mus. no. 4, p. 35 (1875); Boucard, P. Z. S. 1883, p. 455; Sclat. List Vert. An. 8th ed. p. 344 (1883); Nutt. Pr. U. S. Nat. Mus. vi. p. 407 (1883); Zeled. Pr. U. S. Nat. Mus. viii. p. 111 (1885); Ridgw. Man. N. Am. Birds, p. 270 (1887); Salv. & Godm. Ibis, 1889, p. 241.

Conurus asteco, Bp. Compt. Rend. xliv. p. 538 (1857).
Conurus frontalis, Natt. in Mus. Vindob., fide Finsch, Papag. i. p. 522 (1867); Rehnw. Journ. f. Orn. 1881, p. 281 (Consp. Psitt. p. 169); id. Vogelbild. t. xxxiii. f. 5 (1883).

Adult male. Upper parts, cheeks, and ear-coverts green; a narrow frontal band between the nostrils orange-yellow; throat and upper breast brown-olive, with darker shaft-lines; lower breast and abdomen olive; flanks, thighs, and under tail-coverts green; wings and tail as in *C. nanus*, only the smaller under wing-coverts and the axillaries of a lighter and more yellowish green: bill brown

horn-colour; feet blackish; iris yellow. Total length about 9.4 inches, wing 5.1, tail 4.3, bill 0.7, tarsus 0.45.

Female. Like the male.

Young. Wants the orange-yellow band between the nostrils.

Hab. Southern Mexico, Guatemala, Honduras, Nicaragua, and Costa Rica.

a. Ad. sk.	Mexico.	Massena Coll. (Type of species.)
b. ♂ ad. sk.	Mexico.	Verreaux.
$c-i$ . $\sigma$ ; $k-m$ . $Q$ ad. sk.	Tampico, Mexico, February (W. B. Richardson).	Salvin-Godman Coll.
n. ♂; o-r. ♀ ad.	Misantla, Mexico, March (F. D. Godman).	Salvin-Godman Coll.
s, t. 3 ad. sk.	Misantla, Mexico, December (M. Trujillo).	Salvin-Godman Coll.
u, v. ♀ ad. sk.	Vega del Casadero, Mexico, December (M. Trujillo).	Salvin-Godman Coll.
w. ♀ ad. sk.	Sochiapa, Mexico, January (M. Trujillo).	Salvin-Godman Coll.
x. ♀ ad. sk.	La Antigua, Mexico, September (M. Trujillo).	Salvin-Godman Coll.
y-b'. ♂♀ ad. sk.	Playa Vicente, Mexico, December (M. Trujillo).	Salvin-Godman Coll.
c'. $Q$ ad. sk.	S. Lorenzo, Mexico, June (F. Ferrari-Perez).	Salvin-Godman Coll.
d'. β ad. sk.	Plan del Rio, Mexico, August (F. Ferrari-Perez).	Salvin-Godman Coll.
e'. Ad. sk.	Atoyac, Mexico, Ápril (D. W. Smith).	Salvin-Godman Coll.
$f', g'$ . $\mathcal{S} \supseteq \mathrm{ad. sk.}$	Teapa, Mexico, March (D. W. Smith).	Salvin-Godman Coll.
h'. Ad. sk.	Vera Cruz, S. Mexico (Bou-card).	Salvin-Godman Coll.
i'. of ad. sk.	Vera Ćruz, S. Mexico.	Tweeddale Coll.
k'-m'. Ad. sk.	Merida, Yucatan, May (G. F. Gaumer).	Sclater Coll.
<i>n'-t'</i> . Ad. sk.	Holbox Island, Yucatan (G. F. Gaumer).	Salvin-Godman Coll.
u', v'. Ad. sk.	Northern Yucatan (G. F. Gaumer).	Salvin-Godman Coll.
w'. Ad. sk.	Orange Walk, Brit. Honduras, December (G. F. Gaumer).	Salvin-Godman Coll.
x'. Ad. sk.	Belize, British Honduras (Leyland).	Sclater Coll.
y'. Ad. sk.	Vicinity of Belize, Brit. Hon- duras (Blancaneaux).	Salvin-Godman Coll.
z', a". Ad. sk.	Cajabon, Vera Paz, Guatemala (O. Salvin).	Salvin-Godman Col
b". Ad. sk.	San Pedro, Honduras (G. M. Whitely).	Salvin-Godman Coll
a''. $Q$ ad. st. $a''$ . Ad. sk.	Honduras (Dyson). Costa Rica (Carmiol).	Salvin-Godman Coll.
$e^{\prime\prime}$ . Skeleton.		

#### 23. Conurus cactorum.

Psittacus cactorum, Neuw. in Mus. Prine. Maximil.; Kuhl, Consp. Psitt. p. 82 (1820); Neuw. Reis. Bras. ii. pp. 168, 232, 344 (1821); Steph. Gen. Zool. xiv. p. 106 (1826); Less. Man. d'Orn. ii. p. 149 (1828); Neuw. Beitr. iv. p. 193 (1832); Hahn, Orn. Atl., Papag. p. 50, t. 35 (pess.) (1835).

Aratinga flaviventer, Spix, Av. Bras. p. 33, t. xviii. figs. 1, 2 (1824); Steph. Gen. Zool. xiv. p. 137 (1826); Brehm, Mon. d. Papag. t. 23. Aratinga caixana, Spix, Av. Bras. i. p. 34, t. xix. f. 1 (var.) (1824);

Steph. Gen. Zool. xiv. p. 138 (1826); Brehm, l. c. t. 18. f. 1. Sittace cactorum, Wagl. Mon. Psitt. p. 651 (partim) (1832).

Psittacus lepidus, Hahn (nec Ill.), Orn. Atl., Papag. t. 79 (not the text) (1840).

Conurus æruginosus, part., G. R. Gr. Gen. B. ii. p. 413, n. 12 (1845); ? Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 39 (partim); Burm. (nec Linn.) Syst. Ueb. ii. p. 170 (1856).

Conurus cactorum, Souancé, Rev. et Mag. de Zool. 1856, p. 61; Bp. Naumannia, 1856, Consp. Psitt. n. 69; Souancé, Icon. Perr. pl. x. (1857); G. R. Gr. List Psitt. Brit. Mus. p. 38 (1859); Sclat. Cat. Am. B. p. 348, n. 2078 (1862); Schleg. Mus. P.-B. Psittaci, p. 21 (1864); Finsch, Papag. i. p. 517 (1867); G. R. Gr. Hand-list, ii. p. 148, n. 8116 (1870); Pelz. Orn. Bras. p. 258 (note), p. 446 (1871); Gieb. Thes. Orn. i. p. 761 (1872); Sclat. & Salv. Nomenel. Av. Neotrop. p. 112, n. 24 (1873); Schleg. Mus. P.-B. Psittaci, Revue, p. 5 (1874); Cab. Jown. f. Orn. 1879, p. 222; Rehnw. Vogelbild. t. xvii. f. 3 (1878-83); id. Jown. f. Orn. 1881, p. 281 (Consp. Psitt. p. 169); Forb. Ibis, 1881, p. 352; Sclat. List Vert. An. 8th ed. p. 344 (1883); Allen, Bull. Am. Mus. Nat. Hist. ii. p. 263 (1889).

Adult male. Upper parts green, pileum pale brown, lighter on the edges of the feathers and blending on the nape in the green colour of the back; lores, cheeks, throat, sides of the neck, and upper breast pale brown; a yellow line below the eyes, edging the upper ear-coverts; ear-coverts green; lower breast and abdomen dull orange; flanks, thighs, and under tail-coverts yellowish green; bastard-wing and primary-coverts green with a slight bluish tinge, especially on the inner webs; primaries bluish green, greener towards the bases of the outer webs; secondaries greenish blue; all the quills tipped with blackish; earpal edge yellowish in the middle; smaller under wing-coverts yellow-green, the greater ones and quills below blackish grey; tail above green, with the four central feathers blue towards the tips, below golden olive with the outer webs dusky: upper mandible whitish, under mandible horn-brown; feet pale horn-brown; iris orange. Total length about 10.2 inches, wing 5.7, tail 5·1, bill 0·75, tarsus 0·45.

Female. Like the male.

Young. Differs from the adult in having the pileum green, with no brown tinge; the throat and upper breast olive; the lower breast and abdomen olive, with an orange tinge towards the tip of the feathers.

Hab. South-eastern Brazil.

Specimens b and c differ from a in being a little smaller, of

a brighter green, and in having the brown colour of the head with a slight bluish tinge, the cheeks greener, and the orange colour of the lower breast and abdomen paler.

a. Ad. sk.
b, c. Ad. sk.
d. Juv. sk.
e. ♀ ad. sk.
f. Ad. sk.

Brazil. Bahia (*Wucherer*). Bahia. Bahia. Sclater Coll.
Salvin-Godman Coll.
Purchased.
Zool. Soc. Coll.
Purchased.

#### 24. Conurus æruginosus.

Brown-throated Parrakeet, *Edw. Birds*, iv. pl. 177 (1851); *Lath. Syn.* i. p. 243, with var. A (1781); *id. Gen. Hist.* ii. p. 152, with var. A, p. 153 (1822).

Psittaca martinicana, Briss. Orn. iv. p. 356 (1760).

Psittacus æruginosus, Linn. S. N. i. p. 142, n. 17 (1766); Gm. S. N. i. p. 323, n. 17 (1788); Lath. Ind. Orn. i. p. 96, n. 38 (with var. β) (1790); Shaw, Gen. Zool. viii. 2, p. 455 (1811); Bechst. Kurze Ueb. p. 72 (1811–12); Vieill. N. D. xxv. p. 364 (1817); Kuhl, Consp. Psitt. p. 25 (1820); Vieill. Enc. Méth. iii. p. 1398 (1823).

Brown-fronted Parrakeet, *Lath. Syn.* i. p. 243, n. 41, A (1781).
Psittacus plumbeus, *Gm. S. N.* i. p. 326, n. 75 (1788); *Vieill. N. D.* xxv. p. 365 (1817).

Psittacus inornatus, Temm., fide Kuhl, Consp. Psitt. p. 92 (1820). Aratinga æruginosus, Steph. Gen. Zool. xiv. p. 139 (1826).

Sittace cactorum, juv., Wagl. Mon. Psitt. p. 651 (1832). Sittace pertinax, part., Wagl. Mon. Psitt. p. 652 (1832).

Psittacus pertinax, Hahn (nec Linn.), Orn. Atl., Papag. p. 86 (juv.),

t. 66 (1837).

Conurus æruginosus, G. R. Gr. Gen. B. ii. p. 413, n. 12 (syn. emend.) (1845); Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 39; ? Souance, Rev. et Mag. de Zool. 1856, p. 60; ? Bp. Naumannia, 1856, Consp. Psitt. n. 68; ? Burm. Syst. Ueb. ii. p. 170 (1856); G. R. Gr. List Psitt. Brit. Mus. p. 38 (1859); Selat. § Salr. P.Z. & 1867, p. 587 (Rio Negro), 1868, p. 729; Sousa, Mus. Nac. Lisboa, Psittaci, p. 8 (1869); ? G. R. Gr. Hend-list, i. p. 147, n. 8113 (1870); Sclat. P.Z. & 1871, p. 493; Wyatt, Ibis, 1871, p. 381 (Colombia); Sclat. § Salv. Nomencl. Av. Neotrop. p. 112, n. 20 (1873); Garrod, P. Z. & 1874, p. 587; Selat. P. Z. & 1875, p. 684, 1880, p. 716; Rehnw. Vogelbild. t. xvii. f. 5 (1878–83); id. Journ. f. Orn. 1881, p. 282 (Consp. Psitt. p. 170); ? Salvin, Cat. B. Strickl. Coll. p. 465 (Trinidad) (1882); Sclat. List Vert. An. 8th ed. p. 344 (1883).

Conurus chrysophrys, Sw. Two Cent. and a Quart. pt. 5, n. 120 (Guiana) (1838); id. Class. B. ii. p. 300 (1837); G.R. Gr. Gen. B. ii. p. 414, n. 37 (1845); Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 37; Souancé, Rev. et Mag. de Zool. 1856, p. 60; id. Icon. Perr. pl. xi. (1857); G. R. Gr. List Psitt. Brit. Mus. p. 38 (1859) (Trinidad); Selat. S. Salv. P. Z. S. 1867, p. 588; Sousa, Mus. Nac. Lisboa, Psittaci, p. 8 (1869); G. R. Gr. Hand-list, ii. p. 148, n. 8114 (1870); Rehnw. Journ. f. Orn. 1881, p. 282 (Consp. Psitt. p. 170).

Conurus pertinax, Cab. (nec Linn.) in Schomb. Guian. iii. p. 728 (1848); Licht. Nomencl. Av. p. 72 (1854); Burm. Syst. Ueb. ii. p. 170 (1856); G. R. Gr. List Psitt. Brit. Mus. p. 38 (1859); Sclat. Cat. Am. B. p. 348, n. 2077 (1862); Taylor, Ilis, 1864, p. 93 (Venezuela); Schleg. Mus. P.-B. Psittaci, p. 20 (1864); id.

Ned. Tijdschr. Dierk. iii. p. 187 (part.) (1862); Sclat. & Salv. P. Z. S. 1867, p. 588; Finsch, Papag, i. p. 506 (part.) (1867), ii. p. 944 (1868); id. P. Z. S. 1870, p. 585 (Trinidad); ? Sousa, Mus. Nac. Lisboa, Psittaci, p. 8 (1869); G. R. Gr. Hand-list, ii. p. 147, n. 8112 (1870); Selat. P. Z. S. 1871, pp. 493, 494; Pelz. Orn. Bras. pp. 258, 446, lii (1871); Gieb. Thes. Orn. i. p. 766 (part.) (1872); Sclat. & Salv. Nomenel, Av. Neotrop. p. 112, n. 22 (Guiana) (1873); Cab. Journ. f. Orn. 1879, p. 222 (Guiana and Venezuela); Salvin, Ibis, 1886, p. 68.

Conurus chrysogenys, Muss. et Souancé, Rev. et Mag. de Zool. 1854, p. 72 (Rio Negro, Colombia); Sclat. Cat. Am. B. p. 348, n. 2076 (1862); Schleg. Mus. P.-B. Psittaci, p. 21 (1864); Schl. & Salv. P. Z. S. 1867, p. 588; Rehnw. Vogelbild. t. xvii. f. 4 (1878-83).

Conurus cayennensis, Aliq., fide Bp. Naumannia, 1856, Consp. Psitt. in syn. n. 66. Sittace chrysogenys, Natt. MS., fide Pelz. Orn. Bras. p. 258 (1871).

Adult male. Green, crown tinged with blue; circle round the eyes, broader below, orange-yellow; front, anterior part of the lores, cheeks, ear-coverts, and throat drab or brown, more or less fulvous; breast, abdomen, under tail-coverts, and smaller under wing-coverts yellowish green; an orange patch on the middle of the abdomen; bastard-wing and primary-coverts green, bluish towards the tips; quills blue, with the outer webs green towards the base; greater under wing-coverts and quills underneath blackish; tail above green, with the tip of the central feathers bluish, below golden olive; bill horn-brown; feet brown. Total length 9.7 inches, wing 5.5, tail 4.3, bill 0.28, tarsus 0.46.

Adult female. Like the male.

Young. Similar to the adult, only duller and with the orbital yellow circle not well defined.

Hab. Guiana, Venezuela, and Rio Negro.

Two specimens from Mr. Sclater's collection, said to be one from Rio Negro (Parzudaki) and the other from Cayenne (Stevens), have the orange-yellow orbital ring irregularly extended over the cheeks and ear-coverts, and the forehead also tinged with yellow, approaching to a certain extent C. pertinar from St. Thomas.

a c. Ad. st.	British Guiana (Schomburgk).	R. Geograph. Soc.
d. Ad. st.	British Guiana.	R. Schomburgk [C.]. Salvin-Godman Coll.
e y. 3 2 ad. sk.	Roraima, British Guiana, June and November ( <i>H. Whitely</i> ).	Salvin-Godman Coll.
h. Ad. sk.	Roraima, British Guiana, June (H. Whitely).	Sclater Coll.
i l. 3 2 nd. sk.	Quonga, British Guiana, October and November (H. Whitely).	Salvin-Godman Coll.
m. Ad. sk.	Cayenne.	Salvin-Godman Coll.
u. Ad. sk. [var.].	Сауеппе.	Sclater Coll.
o. Ad. sk.	Canaga, Magdalena Valley (Wyatt).	Salvin-Godman Coll.
p, q. Ad. sk.	San Esteban, Venezuela, March (Goering).	Scinter Coll.
r. Ad. sk.	Trinidad.	Purchused.

8. Ad. sk.	Triuidad ?	Salvin-Godman Coll.
t. Ad. sk.	Trinidad?	Selater Coll.
u. 3 ad. sk.	St. Isabel, Upper Rio Negro,	Salvin-Godman Coll.
	Brazil, Sept. (A. R. Wallace).	
v. Ad. st.	Rio Negro.	Massena Coll.*
w. Ad. sk.	Rio Negro?	Sclater Coll.
<i>x.</i> Ad. sk.	S. America.	Sclater Coll.
y. Ad. st.	[Brazil.]	Massena Coll.
z. 3 ad. sk.	S. America.	Zool, Soc. Coll.

#### 25. Countus ocularis.

Connrus pertinax?, Lawr. (nec Linn.), Ann. Lyc. N. Y. vii. p. 333 (1861); Finsch, Papag. i. p. 503 (partim) (1867); Gieb. Thes. Orn. i. p. 766 (partim) (1872).

Comurus chrysogenys, Lawr. (nec Mass. et Souancé) Ann. Lyc. N. Y. viii. p. 11 (1863); Schleg. Mus. P.-B. Psittaci, Revue, p. 5

(1874).

Conurus ocularis, Sclat. & Salv. P. Z. S. 1864, p. 367, 1867, p. 588; Salv. P. Z. S. 1870, p. 214; Salv. Ibis, 1871, p. 93; Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 21 (1873); Cab. Journ. f. Orn. 1879, p. 222; Rehmo. Fogelbild. t. xvii. f. 1 (1878-83); id. Jown. f. Orn. 1881, p. 282 (Consp. Psitt. p. 170); Pelz. u. Lor. Ann. d. naturhist. Hofmus, iii. p. 38 (1888). Comurus ocularius, G. R. Gr. Hand-list, ii. p. 148, n. 8120 (1870).

Adult male. Similar to C. aruginosus, from which it differs in having the green pileum scarcely tinged with bluish in the front part; the orange ring round the eyes broader below than above, where it is slightly indicated, and the abdomen nearly wanting the orange patch in the middle.

Female. Like the male. Hab. Veragua and Panama.

a. Ad. sk.	Veragua (Arcé).	Sclater Coll.
b, c. 3 ♀ ad. sk.	Veragua (Arce).	Salvin-Godman Coll.
d f. o Qad. sk.	Colobre, Veragua (Arcé).	Salvin-Godman Coll.
4, h. 3 2 ad. sk.	Isthmus of Panama (Mc-	Salvin-God-   Types
	Leannan)	man Coll. \ of
i. Ad. sk.	Panama (McLeannan).	Sclater Coll.   species.

# 26. Conurus pertinax.

Psittaeus vernus, Linn. Mus. Ad. Fr. i. p. 14 (1754) (ex Frisch, Orn. iv. t. 54, fig. inf., 1743). Yellow-faced Parrakeet, Edw. Glean. p. 49, pl. 234 (1758). Psittaen illiniaen, Briss. Orn. iv. p. 353 (1760). Psittacus pertinax, Linn. S. N. i. p. 142, n. 15 (1766) †; Gm. S. N.

\* Specimen figured by Sonancé, Icon. Perr. pl. xi., under the name of C. chrysophrys.

<sup>†</sup> Linne's description, as one can easily perceive by referring to the original one of the same bird in the 'Museum Adolphi Frederici,' is inaccurate either on account of a lapsu calumi or a misprint, but his reference to Frisch's plate makes the identification of S. pertinax perfectly satisfactory.

i. p. 322, no. 15 (1788); Lath. Ind. Orn. i. p. 94, n. 34 (1790); Shaw, Gen. Zool. viii. 2, p. 445 (1811); Bechst. Kurze Ueb. p. 72 (part.) (1811-12); Vieill. N. D. xxv. p. 360 (1817); Kuhl, Consp. Psitt. p. 24 (1820); Vieill. Enc. Méth. iii. p. 1395 (1823); Hahn, Orn. Atl., Papag. p. 86, t. 66 (1837); Thienem. Fortyft. d. ges. Vög. p. 75 (1846).

La Perruche illinoise, D'Aubent, Pl. Enl. 528.

L'Aputé-juba, Buff. Hist. Nat. Ois. vi. p. 269 (1779).

Illinois Parrakeet, Lath. Syn. i. p. 228 (1781); id. Gen. Hist. ii. p. 148 (1822).

La Perruche à front jaune, Levaill. Perr. pls. 34, 35 (?), 36 (var.),

37 (?) (1801).

? Psittacus tui, Ledru (nec Gm.), Voy. aux îles de Ténériffe, la Trinité, Saint Thomas, etc., p. 392 (1810).

Psittacus carolinensis, Kuhl (nec Gm.), Consp. Psitt. p. 23 (1820);

Wagl. Mon. Psitt. p. 743 (av. dub.) (1832).

Aratinga pertinax, Spix, Av. Bras. i. p. 37 (1824); Steph. Gen. Zool. xiv. p. 132 (1826); Brehm. Mon. de Papag. t. 29 (ex Levaillant). Conurus aureus, femelle, Less. Tr. d'Orn. p. 214 (1831).

Sittace pertinax, Wagl. Mon. Psitt. p. 652 (part.) (1832); Hartl.

Syst. Verz. Ges. Mus. p. 86 (1844).

Compus pertinax, G. R. Gr. Gen. B. ii. p. 413, n. 11 (1845); Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 36; Souancé, Rev. et Mag. de Zool. 1856, p. 60; Bp. Naumannia, 1856, Consp. Psitt. n. 66; ? Sclat. Cat. Am. B. p. 348, n. 2077 (1862); Schleg. Mus. P.-B. Psittaci, p. 20 (1864); Finsch, Papag. i. p. 506 (partim) (1867); Russ, Journ. f. Orn. 1869, p. 82; ? Sousa, Mus. Nac. Lisboa, Psittaci, p. 8 (1869); Gieb. Thes. Orn. i. p. 766 (part.) (1872); ? Schleg. Mus. P.-B. Psittaci, Revue, p. 5 (part.) (1874); Rehnw. Journ. f. Orn. 1881, p. 283 (Consp. Psitt. p. 171); Marsch. Die Papag. p. 55 (1889).

? Conurus canigularis, Thienem. Fortpft. d. ges. Vög. p. 76 (1846).
Conurus xanthogenius, Bp. Consp. Av. i. p. 1 (1850); id. Compt. Rend.
xxx. p. 132 (1850); id. Rev. et Mag. de Zool. 1854, p. 150, n. 25;
id. Naumannia, 1856, Consp. Psitt. n. 63; Schleg. Dierent. p. 81
(1864); id. Mus. P.-B. Psittaci, p. 18 (1864); id. Ned. Tijdschr.
Dierk. iii. p. 187 (1866); Sclat. & Salv. Nomencl. Av. Neotrop.
p. 112, n. 23 (1873).

Psittacus barbarossa, Licht., fide Bp. Naumannia, 1856, Consp. Psitt.

in syn. n. 66.

Conurus xantholemus, Sclat. Ann. § Mag. Nat. Hist. (3) iv. p. 225 (1859); A. § E. Newt. Ibis, 1859, p. 374; Cass. Pr. Acad. Nat. Sc. Philad. 1860, p. 377; Sclat. Cat. Am. B. p. 348, n. 2079 (1862); Tayl. Ibis, 1864, p. 171; Sclat. § Salv. P. Z. S. 1867, p. 588; G. R. Gr. Hand-list, ii. p. 148, n. 8115 (1870); Salv. P. Z. S. 1870, p. 214; Sclat. P. Z. S. 1871, p. 787; Garrod, P. Z. S. 1873, pp. 465, 633, 1874, p. 587; Cab. Journ. f. Orn. 1879, p. 222; Rchaw. Vogelbild. t. xvii. f. 8 (1878-83); Sclat. List Vert. An. 8th ed. p. 344 (1883); Cory, List B. West Ind. p. 20 (1885); id. Auk, 1886, p. 456; id. Birds of W. Ind. p. 179 (1889).

Conurus (?) newtonorum, Sclat., fide G. R. Gr. Hand-list, ii. p. 148,

in syn. n. 8115 (1870).

Adult male. Forehead, sides of the head, and chin yellow-orange, crown with a slight blue tinge; occiput, nape, and rest of upper surface green; throat and upper breast olive; lower breast and abdomen yellowish green, marked with orange on the middle of

the abdomen; bastard-wing and primary-coverts green, bluish towards the tips; quills blue, edged with black at the tip, and with the outer webs towards the base green; smaller under wing-coverts yellowish green, the greater ones blackish, slightly edged with vellowish; quills underneath blackish; tail above green, the four eentral feathers bluish towards the tips; tail below golden olive: bill horn-brown; feet dusky. Total length about 10 inches, wing 5.4, tail 4.4, bill 0.68, tarsus 0.5.

Female. Like the male.

Hab. St. Thomas and St. Croix.

A specimen from Mr. Schater's collection, labelled S. America, appears to have lived in confinement; it is larger than any specimens from St. Thomas, and seems to have had flesh-coloured feet. Total length 11.5 inches, wing 5.1, tail 5.2, bill 0.93.

I have not seen specimens from St. Croix \*.

a, b. Ak. sk.	St. Thomas (F. R. Newton).	Prof. A. Newton [P.]. (Types of C. xunthe-
		læmus, Scl.)
c. Ad. sk.	St. Thomas $(F. R. Newton)$ .	Sclater Coll.
d. Ad. sk.	St. Thomas (Riise).	Sclater Coll.
e. Ad. sk.	St. Thomas (R. Swift).	Smithsonian Institution [P.].
f. Ad. sk.	St. Thomas $(R. Swift)$ .	Salvin-Godman Coll.
g. Ad. sk.	St. Thomas (J. Akhurst).	Salvin-Godman Coll.
h. Ad. sk.	S. America.	Sclater Coll.
<i>i</i> . ♂ ad. sk.	St. Thomas.	Zool. Soc. Coll.

#### 27. Conurus aureus.

Tui apute-juba, Marcgr. Hist. rer. nat. Bras. ix. p. 206 (1648); Licht. Abh. Berl. Akad. 1817, p. 167.

Golden-crowned Parrakeet, Edw. Glean. v. p. 50, pl. 253 (upper figure) (1758); Lath. Gen. Syn. i. p. 251, n. 54 (1781); id. Gen. Hist. ii. p. 178 (1822).

Psittaca brasiliensis, Briss. Orn. iv. p. 337 (1760).

Perruche à front jaune de Cayenne, D'Aubent, Pl. Enl. 838.

Perriche couronnée d'Or, Buff. Hist. Nat. Ois. vi. p. 271 (1779). Buff-fronted Parrakeet, Lath. Syn. Suppl. p. 61, n. 135 (1787).

Psitracus aureus, Gm. (nec Shaw) S. N. i. p. 329, n. 87 (1788);

Bechst. Lath. Ueb. p. 79 (1811); Licht. Abh. Berl. Akad. 1817,
p. 167; Kuhl, Consp. Psitt. p. 24 (1820); Vieill. Enc. Méth. iii.
p. 1397 (1823); Voigt, Cuv. Vebers. p. 732 (1831); Neuwied, Beitr.
iv. p. 173 (1832); Hahn, Orn. Atl., Papag. p. 34, t. 17 (1834);
Dubois, Orn. Gal. pl. 45 (1839).

<sup>\*</sup> Most likely in Dominica a distinct species exists:-Parrot, Ober, Pr. U.S. Nat. Mus. 1878, p. 64; Ibis, 1879, p. 211.

<sup>&</sup>quot;Apparently allied to Conurus pertinax" (Ibis, 1. c.). Hab. Dominica.

Psittacus canicularis, var.  $\beta$ , Lath. Ind. Orn. i. p. 95 (1790).

Psittacus brasiliensis, *Latli.* (nee Linn.), Ind. Orn. i. p. 103, n. 63 (1790); Vieill. N. D. xxv. p. 363 (1817).

La Perruche couronnée d'Or, Levaill. Perr. pl. 41 (1801).

Maracana frente naranjada, Azara, Apunt. Hist. nat. Parag. i. p. 426, n. 280 (1803).

Le Maracana à front orangé, Azara, Voy. (ed. Sonn.) iii. p. 64 (1809).

Psittacu's regulus, Shaw, Gen. Zool. viii. 2, p. 453 (1811); ? Gulliv. P. Z. S. 1875, p. 489.

Psittacus canicularis, Licht. (nec Linn.) Doubl. Cat. Berl. Mus. p. 6 (1823).

Aratinga aureus, Spix, Av. Bras. i. p. 37 (1824); Steph. Gen. Zool. xiv. p. 139 (1826); Brehm. Mon. d. Papag. t. 20.

Conurus aureus, Less. Tr. d'Orn. p. 214 (1831); G. R. Gr. Gen. B. ii. p. 413, n. 14 (1845); Hartl. Index Azara Apunt. p. 18 (1847); Bp. Naumannia, 1856, Consp. Psitt. n. 64; Sclat. P. Z. S. 1857, p. 230; G. R. Gr. List Psitt. Brit. Mus. p. 37 (1859); Sclat. Cat. Am. B. p. 348, n. 2074 (1862); Schleg. Mus. P.-B. Psittaci, p. 19 (1864); Finsch, Papag. i. p. 499 (1867); Sclat. § Salv. P. Z. S. 1867, p. 587; Pelz. Orn. Bras. pp. 258, 446, lii (1871); Gieb. Thes. Orn. i. p. 760 (1872); Sclat. § Salv. Nomencl. Av. Neotrop. p. 112, n. 18 (1873); Schleg. Mus. P.-B. Psittaci, Revue, p. 5 (1874); Garrod, P. Z. S. 1874, p. 387; Perl. Journ. f. Orn. 1874, p. 283; Rehnw. Vogelbild. t. ii. f. 2 (1878-83); id. Journ. f. Orn. 1881, p. 283 (Consp. Psitt. p. 121); Salv. Cat. B. Strickl. Coll. p. 465 (1882); Sclut. List Vert. An. 8th ed. p. 343 (1883); Salv. Hbis, 1886, p. 68; Berl. Journ. f. Orn. 1887, p. 121; Allen, Bull. Am. Mus. Nat. Hist. ii. p. 104 (1889).

Am. Mus. Nat. Hist. ii. p. 104 (1889). Sittace aurea, Wagl. Mon. Psitt. p. 649 (1832); Hartl. Syst. Verz.

Ges. Mus. p. 86 (1844).

Conurus canicularis, Cab. (nec Linn.) in Schomb. Brit. Guian, iii, p. 728 (1848); Licht. Nomenel. Av. p. 73 (1854); Bp. Naumannia, 1856, Consp. Psitt. n. (?); Burm. Syst. Ueb. ii. p. 169 (1856); Schley. Mus. P.-B. Psittaci, p. 19 (1864); id. op. cit. Revue, p. 5 (1874).

Mus. P.-B. Psittaci, p. 19 (1864); id. op. cit. Revue, p. 5 (1874). Eupsittula aurea, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 43; Souancé, Rev. et Mag. de Zool. 1856, p. 61; Sousa, Mus. Nac. Lisboa, Psittaci, p. 9 (1869); G. R. Gr. Hand-list, ii. p. 148, n. 8123 (1870).

Eupsittula canicularis, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 44.

Eupsittaca aurea, Cab. Journ. f. Orn. 1862, p. 335.

Conurus brasiliensis, Finsch, Nat. Tijdschr. Dierk. i. p. xv (1863).

Adult male. Green; forehead and crown yellow-orange, vertex and lores bluish, a ring round the naked skin surrounding the eyes orange; cheeks and throat olive, with a slight tinge of bluish; breast olive; abdomen, under tail-coverts, and under wing-coverts greenish yellow; primaries and primary-coverts green, more or less blue towards the tips, which are black; inner web of the primaries olive; secondaries blue, tertials green; greater under wing-coverts olive; tail-feathers green, more or less blue towards the tips; quills and tail-feathers below golden olive, with the tips and outer webs dusky: naked skin round the eyes grey; bill and feet blackish; iris yellow-orange. Total length about 10·8 inches, wing 5·9, tail 5·7, bill 0·7, tarsus 0·5.

Female. Like the male.

Hab. Guiana, Amazons Valley, Bolivia, Brazil, and Paraguay. Some specimens want the orbital yellow circle.

<ul><li>α. Ad. sk.</li><li>b, c. Ad. st.</li></ul>	S. America. Para.	Purchased. R. Graham, Esq.
d. Ad. sk.	Mexiana, Lower Amazons	[P.]. Sclater Coll.
e. ♀ ad. sk.	(Wallace). Mexiana, Lower Amazons,	Salvin-Godman Coll.
f. Ad. sk.	January (Wallace). Brazil.	Sclater Coll,
$g-k$ . $\mathcal{S}$ ; $l$ , $m$ . $\mathcal{Q}$ ad. sk.	Chapada, Matto Grosso, Brazil, April, May, and August (H.	Salvin-Godman Coll.
n. Ad. sk. o-q. Ad. sk.	H. Smith). Bahia (Wucherer). Bahia (Wucherer).	Sclater Coll. Salvin-Godman Coll.
$r. \mathcal{J} \text{ imm. sk.}$	Rio Paraná, May (Natterer).	Salvin-Godman Coll.

#### 28. Conurus canicularis.

The red and blue-headed Parrakeet, Edw. Birds, iv. p. 176, pl. 176 (1751); Lath. Gen. Syn. i. p. 242 (1781); id. Gen. Hist. ii. p. 151 (1822).

Psittaca brasiliensis fronte rubra, Briss. Orn. iv. p. 339 (1760).
Psittacus canicularis, Linn. S. N. i. p. 142, n. 16 (1766) \*; Gm. S. N. i. p. 323, n. 16 (1788); Lath. Ind. Orn. i. p. 94, n. 37 (1790).
Shaw, Gen. Zool. viii. 2, p. 445 (1811); Bechst. Lath. Ueb. p. 72 (1811-12); Vieill. N. D. xxv. p. 364 (1817); Kuhl, Consp. Psitt. p. 25 (1820); Vieill. Enc. Méth. iii. p. 1398 (1823); Voigt, Cuv.

Ueb. p. 732 (1831).
Perruche à front rouge du Brésil, D'Aubent. Pl. Enl. 767 (ex

Edwards).

Perriche à front rouge, Buff. Hist. Nat. Ois. vi. p. 268 (1779). La Perruche à front rouge, Levaill. Perr. i. p. 113, pl. 40 (1801).

Aratinga canicularis, Steph. Gen. Zool. xiv. p. 139 (1826).

Psittacus petzii, Leiblein in Mus. Würzeburg, fide Wagl. Mon. Psitt. p. 650 (1832); Hahn, Orn. Atl., Papag. p. 85, t. 64 (1837). Sittace petzii, Wagl. Mon. Psitt. p. 650 (1832); Hartl. Syst. Verz.

Ges. Mus. p. 86 (1844).

Psittacus (Aratinga) eburnirostrum, Less. Rev. Zool. 1842, p. 135. Conurus petzii, G. R. Gr. Gen. B. ii. p. 413, n. 63 (1845); Bp. Naumannia, 1856, Consp. Psitt. n. 65; Souancé, Icon. Perr. pl. ix. (1857); Sclat. P. Z. S. 1857, p. 230; id. Ann. § Mag. N. H. (3) iv. p. 224 (1859); G. R. Gr. List Psitt. Brit. Mus. p. 37 (1859); Taylor, Ibis, 1860, p. 120; Salv. § Sclat. Ibis, 1860, p. 401; Sclat. Cat. Am. B. p. 348, n. 2075 (1862); Schleg. Mus. P.-B. Psittaci, p. 20 (1864); Finsch, Papag. i. p. 502 (1861); Laur. Ann. Lyc. N. Y. ix. p. 131 (1868); Frantz. Journ. f. Orn. 1869, p. 365; Salv. Ibis, 1871, p. 92; Gieb. Thes. Orn. i. p. 766 (1872); Sclat. §

<sup>\*</sup> Psittacus canicularis, Linn., was established on Edwards's Red and blueheaded Parrakeet, and as Edwards describes the insides of the quills as of a dark ash-colour, this character settles at once the identity of Linné's bird with Conurus petzi.

Salv. Nomencl. Av. Neotrop. p. 112, n. 19 (1873); Schleg. Mus. P.-B. Psittaci, Revue, p. 5 (1874); Garrod, P. Z. S. 1873, pp. 466, 633, 1874, p. 587; Lawr. Mem. Bost. Soc. N. H. ii, p. 296 (1874); id. Bull. U.S. Nat. Mus. n. 4, p. 36 (1875); Rehnw. Vogelbild. t. xvii. f. 2 (1878–83); id. Journ. f. Orn. 1881, p. 283 (Consp. Psitt. p. 171); Sclat. List Vert. An. 8th ed. p. 343 (1883); Salv. P. Z. S. 1883, p. 426; Zeled. Pr. U. S. Nat. Mus. viii. p. 111 (1885).

Conurus eburnirostrum, G. R. Gr. Gen. B. ii. p. 414, n. 36 (1845). Aratinga eburnirostrum, Less. Descr. de Mamm. et Ois. p. 189 (1847). Conurus canicularis, G. R. Gr. Gen. B. iii. App. p. 20 (1849); Bp. Naumannia, 1856, Consp. Psitt. n. ?; G. R. Gr. Hand-list, ii. p. 148,

n. 8122 (1870); Salv. Ibis, 1871, p. 88 (note).

Eupsittula petzi, Bp. Compt. Rend. xxxvii. p. 807 (1853); id. Not. Coll. Delattre, p. 2 (1854); id. Rev. et Mag. de Zool. 1854, p. 150, n. 42; Souancé, Rev. et Mag. de Zool. 1856, p. 61; Sousa, Mus. Nac. Lisboa, Psittaci, p. 9 (1869); G. R. Gr. Hand-list, ii. p. 148, n. 8121 (1870).

Eupsittula canicularis, Bp. Rev. et Mag. de Zool. 1854, p. 150,

n. 44

Conurus canieularis, G. R. Gr. List Psitt. Brit. Mus. p. 37 (imm.) (1859).

Eupsittaca petzi, Cab. Journ. f. Orn. 1862, p. 335.

Adult male. Green; forehead orange, vertex and lores blue, cheeks olive-green; throat and breast olive; abdomen, under taileoverts, and under wing-coverts green-yellow; primary-coverts green; primaries green, blue towards the tip and tipped with black, their inner webs blackish; secondaries blue, with a very narrow green edge on the outer webs; tertials green; quills underneath blackish grey; greater under wing-coverts blackish grey, edged with yellow; tail-feathers above green, the two central ones slightly tinged with blue towards the tip; tail underneath olive-yellow, slightly dusky on the outer webs of the feathers: upper mandible fleshy white, under mandible dusky on the sides, white on the anterior part; feet grey; naked orbital skin white; iris yellow. Total length about 9.6 inches, wing 5.5, tail 4.5, bill 0.75, tarsus 0.45.

Adult female. Like the male.

Immature. The red on the forehead much more restricted and confined to a small spot.

Hab. Mexico and Central America as far as Costa Rica.

a. Ad. st.	Mexico.	Massena Coll.
b. Ad. sk.	Mexico, September (J. Taylor).	Gould Coll.
c. Ad. sk.	S. Mexico (Sallé).	Sclater Coll.
d, e. ♂♀ ad. sk.	Mazatlan, W. Mexico, Dec.	Salvin-Godman Coll.
, ,	(A. Forrer).	
f, g. 3 ad. sk.	Santiago, Ter. of Tepic, May	Salvin-Godman Coll.
* / * *	(W. B. Richardson).	
$h-k$ . $\mathcal{J} \circ \mathcal{Q}$ ad.	San Blas, Ter. of Tepic, May	Salvin-Godman Coll.
sk.	(W. B. R.).	
l. J ad. sk.	Plains of Colima, W. Mexico,	Salvin-Godman Coll.
	February (J. Xantus).	

m. ♀ ad. sk.	Plains of Colima, Jan. (W. B.	Salvin-Godman Coll.
$n, o. \ \mathcal{J} \ \mathcal{Q} \ \text{ad.sk.}$	Richardson). Beltram, Jalisco, April (W. Lloyd).	Salvin-Godman Coll.
$p, q. \ \mathcal{S} \ \mathcal{Q} \ \text{ad. sk.}$	Manzanillo, Colima, June (W. Lloyd).	Salvin-Godman Coll.
r. 3 ad. sk.	Hac. S. Marcos, Jalisco, May (W. Lloyd).	Salvin-Godman Coll.
s. Ad. sk.	Acapulco, State of Guerrero, March (Markham).	Salvin-Godman Coll.
$t, u. \ \beta \ Q \ \text{ad. sk.}$	Acapulco, State of Guerrero, Sept. (H. H. Smith).	Salvin-Godman Coll.
v. ♀ ad. sk.	Tierra Colorado, State of Guerrero, Oct. (H. H. Smith).	Salvin-Godman Coll.
w. Ad. sk.	Dos Arroyos, State of Guerrero, Sept. (H. H. Smith).	Salvin-Godman Coll.
$x$ . $\circ$ iuv. sk.	Putla,	Purchased.
$x$ . $\[ \downarrow \]$ juv. sk. $y$ . $\[ \circlearrowleft \]$ ad. sk.	Cacoprieto, January (Sumi- chrast).	Salvin-Godman Coll.
a'. $Q$ ad. sk.	Tonala Chiapas, June (W. B. Richardson).	Salvin-Godman Coll.
b'. Ad. sk.	Rio Matagua, Guatemala, Feb. (O. Salvin).	Salvin-Godman Coll.
c'. Ad. sk.	Nicaragua.	Massena Coll.
d'. ♂ ad. sk.	Costa Rica (Carmiol).	Salvin-Godman Coll.
e. ♀ ad. sk.	San Juan, Costa Rica, January (Dr. A. von Frantzius).	Salvin-Godman Coll.

#### 7. CONUROPSIS.

Type. C. carolinensis.

Range. The same as that of the only species.

Conuropsis, Salvad. MS.....

# 1. Conuropsis carolinensis.

Caroline Parrot, Cutesby, Nat. Hist. of Carol. pl. 11 (1731); Lath. Syn. i. p. 227 (1781); id. Gen. Hist. ii. p. 147 (part.) (1822).

Psittaca carolinensis, Briss. Orn. iv. p. 350 (1760).

Psittacus carolinensis, Linn. S. N. i. p. 141, n. 12 (1766); Müll. S. N. Suppl. p. 74 (1776); Gm. S. N. i. p. 320, n. 13 (1788); Lath. Ind. Orn. i. p. 93, n. 33 (with var. \(\beta\)) (1790); Shaw, Gen. Zvol. viii. 2, p. 444 (1811); Wils. Am. Orn. iii. p. 89, pl. 24. f. 1 (1811); Bechst. Kurze Ueb. p. 72 (1811–12); Vicill. N. D. xxv. p. 369 (1817); Bp. Syn. p. 41 (1828); id. Amer. Orn. i. p. 376, pl. 26. f. 1 (1832); Nutt. Man. i. p. 545 (1832); Aud. Orn. Biogr. v. p. 135, pl. 26 (1832); Cass. Pr. Ac. Philad. 1864, p. 239.

Perruche de la Caroline, D'Aubent, Pl. Enl. 499. Papegai à tête aurore, Buff. Hist. Nat. Ois. vi. p. 247 (1779).

Orange-headed Parrot, Lath. Syn. i. p. 304, n. 111 (1781).

Psittacus Indovicianus, Gm. S. N. i. p. 347, n. 126 (1788); Bechst. Kurze Ueb. p. 72 (1811-12); Kuhl, Consp. Psitt. p. 23 (1820); Voigt, Cuv. Uebers. p. 732 (1831).

Psittacus carolinensis, var.  $\beta$ , Lath. Ind. Orn. i. p. 93 (1799).

Perruche à tête jaune, Levaill. Perr. pl. 33 (1801).

Carolina Parrot, var. A, Lath. Gen. Hist. ii. p. 147 (1822). Psittacus thalassinus, Vieill. Enc. Méth. iii. p. 1377 (1823). Psittacus luteocapillus, Vieill. Enc. Méth. iii. p. 1402 (1823). Aratinga carolinensis, Steph. Gen. Zool. xiv. p. 136 (1826). Aratinga Indovicianus, Steph. Gen. Zool. xiv. p. 136 (1826).

Conurus carolinensis, Less. Tr. d'Orn, p. 211 (1831); Bp. Comp. List, p. 38 (1838); G. R. Gr. Gen. B. ii. p. 413, n. 8 (1845); Bp. Consp. Av. i. p. 1 (1850); Woodh. Sitgr. Rep. p. 89 (1853); Bp. Consp. Av. 1, p. 1 (1850); Woodal, Sulyr, Rep. p. 89 (1853); Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 34; Souancé, Rev. et Mag. de Zool. 1856, p. 60; Bp. Naumannia, 1856, Consp. Psitt. n. 62; Wied, Journ. f. Orn. 1857, p. 99; Baird, B. N. Am. p. 67 (1858); G. R. Gr. List Psitt. Brit. Mus. p. 36 (1859); Tayl. Ibis, 1862, p. 128; Hayd. Rep. 1862, p. 154; Schat. Cat. Am. B. p. 347, 2070 (1863); Schleg Mus. B. P. Britter, p. 17 (1864); Event. n. 2070 (1862); Schleg. Mus. P.-B. Rsittaci, p. 17 (1864); Finsch, Papag. i. p. 478 (1867); Cones, Pr. Bost. Soc. xii. p. 119 (1868); Allen, Mem. Bost. Soc. i. p. 525 (1868); Sousa, Mus. Nae. Lisboa, Psittaci, p. 8 (1869); Turnb. B. E. Pa. 1869, p. 41; Russ, Journ. f. Orn. 1869, p. 82, 1870, p. 30; G. R. Gr. Hand-list, ii. p. 147, n. 8108 (1870); Allen, Bull. M. C. Z. ii. p. 308 (1871), iii. p. 130 (1872); Trippe, Pr. Bost. Soc. xv. p. 233 (1872); Stolk. Journ. f. Orn. 1872, p. 3; Gieb. Thes. Orn. i. p. 761 (1872); Coues, Key, p. 199, f. 133 (1872); Snow, B. Kans. p. 2 (1873); Schleg. Mus. P.-B. Psittaci, Revue, p. 5 (1874); B., B. & R. N. Am. Birds, ii. p. 587, pl. 56. figs. 1, 2 (1874); Coues, B. of North-West, p. 296 (1874); Schmidt, P. Z. S. 1880, p. 310; Rehnw. Vogelbild. t. ii. f. 8 (1878-83); id. Journ. f. Orn. 1881, p. 279 (Consp. Psitt. p. 167); Salv. Cat. B. Strickl. Coll. p. 465 (1882); Coues, Checklist N. Am. B. p. 80, n. 400 (1882); Selat. List Vert. An. 8th ed. p. 342 (1883); Coues, Key to N. Am. B. p. 496, figs. 346, 347 (1884); A. O. U. Check-list N. Am. B. p. 206 (1886); Shufeldt, Journ. Anat. & Phys. xx. p. 407, pls. x., xi. (1886); Ridgw. Man. N. Am. B. p. 270 (1887); Cooke, Rep. B. Migr. Miss. Valley, p. 124 (1888).

Sittace Iudoviciana, Wagl. Mon. Psitt. p. 656 (1832); Hartl. Syst.

Verz. Ges. Mus. p. 86 (1844).

Arara carolinensis, Selby, Nat. Libr., Parr. p. 81 (1836).

Centurus (err.) carolinensis, Aud. Syn. B. N. Am. p. 189 (1839); id. B. Am. iv. p. 306, pl. 278 (1842).

Conurus ludovicianus, G. R. Gr. List Psitt. Brit. Mus. p. 36 (1859).

Adult male. Green, lower parts much paler; head and upper part of the neck yellow; forehead, lores, region round the eyes, and cheeks orange; scapulars, greater wing-coverts, and tertials tinged with olive; primary-coverts deep green; primaries yellowish at the base of the outer webs; bend of the wing and carpal edge yellow; greater under wing-coverts and quills underneath greyish black; tail underneath olive, more or less dusky on the outer webs of the feathers; thighs with some orange feathers: bill white horn-colour; feet vellowish flesh-colour; iris brown-grey. Total length 12.5 inches, wing 7.5, tail 6.2, bill 0.9, tarsus 0.56.

Female. Like the male, only the orange colour of the head less

Young. No yellow colour on the head, which is green, except the orange forehead and lores; bend of the wing and carpal edge yellowish green; thighs green, with no orange feathers.

Hab. "Formerly Florida and the Gulf States north to Maryland,

the Great Lakes, Iowa, and Nebraska, west to Colorado, the Indian Territory, and Texas, and straggling north-eastward to Pennsylvania and New York. Now restricted to the Gulf States and the Lower Mississippi Valley, and of local occurrence only." (A. O. U. Code.)

a. Ad. st.	North America.	J. J. Audubon, Esq. [P.].
b. Ad. sk.	North America.	J. J. Audubon, Esq.
c. Ad. sk.	North America.	Sclater Coll.
d-g. ♂ ad.; h. ♀ ad. sk.	Fort Drum, Florida, October (W. Hoxie).	Salvin-Godman Coll.
i. ♂ad.; k, l. ♀ ad. sk.	Lake Okechobee, Florida, Nov. (W. Hoxie).	Salvin-Godman Coll.
m. Ad. sk.	Lake Okechobee, Florida, April (C. H. Merriam).	Salvin-Godman Coll.
$n-q$ . $\sigma$ ad.; $r-y$ . $\Omega$ ad. sk.	Linden, Florida, February (W. E. D. Scott).	Salvin-Godman Coll.
z. ♂ ad. sk.	Tarpon Springs, Florida, Jan. (W. E. D. Scott).	Salvin-Godman Coll.
a'. d ad. sk.	Miami, Florida, Dec. (H. W. Henshaw).	Salvin-Godman Coll.
$b'$ . $\  \  \  \  $ imm. sk.	Cedar Keys, Florida, Dec. (H. W. Henshaw).	Salvin-Godman Coll.
c'. ♀ juv. sk.	Enterprise, Florida, Feb. (H. W. Henshaw).	Salvin-Godman Coll.

#### 8. CYANOLYSEUS.

Type.

Cyanoliseus, Bp. Rev. et Mag. de Zool. 1854, p. 150 . . . . C. byroni. Cyanolyseus, Bp. Ann. Sc. Nat. (4) i. p. 108 (1854). Cyanoliseos, G. R. Gr. List Psitt. Brit. Mus. p. 34 (1859). Cyanolyseos, Sclat. Cat. Am. B. p. 346 (1862).

Range. Southern part of South America.

# Key to the Species.

a. Flanks yellow; a red patch in the middle of the abdomen: smaller; wing 9·2 inches ....... patagonus, p. 205.
b. Flanks yellow; a red patch in the middle of the abdomen: larger; wing 10·6 inches ....... byroni, p. 207.

# 1. Cyanolyseus patagonus.

Maracana patagon, Azara, Apunt. Hist. Nat. Parag. i. p. 420 (1803).

Le Patagon, Azara, Voy. (ed. Sonn.) iii, p. 60 (1809).

Psittacus patagonus, Vieitl. N. D. xxv. p. 367 (1817); id. Enc. Méth. iii. p. 1400 (1823).

Patagonian Maccaw, Lath. Gen. Hist. ii. p. 105 (1822). Psittacus patagonicus, Voigt, Cuv. Uebers. p. 726 (1831). Arara patagonica, part., Less. Tr. d'Orn. p. 187 (1831); Selby, Nat. Libr., Parrots, p. 79 (partim) (1836).

Sittace patagonica, Wagl. Mon. Psitt. p. 659 (1832).

Conurus patachonicus, Gould & Darw. Voy. of 'Beagle,' Birds, p. 113 (Bahia Blanca) (1841).

Conurus cyanolyseos, part., G. R. Gr. Gen. B. ii. p. 413, n. 5 (1845);
 Hartl. (nec Molina) Ind. Azara Apunt. p. 17 (1847);
 Burm. Journ. f. Orn. 1858, p. 157.

Cyanolyseus patagonus, part., Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 28; id. Naumannia, 1856, Consp. Psitt. n. 29 (partim).

Conurus patagonicus, Burm. Journ. f. Orn. 1860, p. 243; Sclat. P. Z. S. 1868, p. 530; Leyb. Exc. Pamp. Argent. (1873); Mart.

Journ. f. Orn. 1875, p. 442.

Conurus patagonus, Burm. Reise La-Plata Staat, i. p. 130, ii. p. 441 (1861); Finsch, Papag. ii. p. 444 (partim) (1867); Gieb. Thes. Orn. i. p. 765 (partim) (1872); Selat. P. Z. S. 1872, p. 549 (Rio Negro); Selat. & Salv. Nomenel. Av. Neotrop. p. 111, n. 1 (partim) (1873); Selat. P. Z. S. 1873, p. 761; Durnford, Ibis, 1877, pp. 37, 186, 1878, pp. 64, 396; Burm. P. Z. S. 1878, p. 75; Gibs. Ibis, 1880, p. 1; Rehnw. Journ. f. Orn. 1881, p. 277 (Consp. Psitt. p. 165); White, P. Z. S. 1882, p. 620; Rehnw. Vogelbild. Nachtr. 83 (1883); Selat. List Vert. An. 8th ed. p. 341 (1883); Barrows, Auk, 1884, p. 28; Selat. & Huds. Argent. Orn. ii. p. 41 (1889).

Conurus patachonicus, Hudson, P. Z. S. 1871, p. 7, 1872, p. 607.

Adult male. Head, neck, back, and scapulars dark olive-brown; lower back, rump, upper tail-coverts, and flanks yellow, with a slight olive tinge, especially on the upper tail-coverts; throat and breast greyish brown; an irregular whitish band, generally interrupted in the middle, across the upper part of the breast; middle of the abdomen and thighs orange-red; under tail-coverts oliveyellow; upper and under wing-coverts olive; bastard-wing, primary-coverts, and quills blue, tipped with black, the secondaries bluish green; inner web of the quills partly blackish; quills underneath and greater under wing-coverts blackish; tail-feathers above olive-green, with a bluish tinge along the middle of the central ones; inner webs and under surface of the tail-feathers brown: bill horn-black; feet pale reddish; "iris white" (Bridges). Total length 17.5 inches, wing 9.2, tail 9.5, bill 1.2, tarsus 0.75.

Female. Similar to the male. Hab. La Plata and Patagonia.

a. Ad. sk.	Uruguay.	Alan Peel, Esq. [C.].
b. ♂ ad. sk.	Rio Negro, April.	Salvin-Godman Coll.
c, d. ♀ ad. sk.	Mendoza, Feb. (Weishaupt).	Salvin-Godman & Sclater Colls.
e, f. ♂♀ad. sk.	Cosquin, Cordova, Arg. Republic, June.	E. W. White [C.].
y. ♂ ad. sk.	Catamarca, Sept.	Purchased.
h. d ad. sk. [var.].	Pampas Argentinas (Leybold).	Salvin-Godman Coll.
i. Ad. sk.	Campana, July.	H. Durnford, Esq.
j. ♀ ad. sk.	Chupat, Patagonia, Nov.	[C.]. II. Durnford, Esq.

### 2. Cyanolyseus byroni.

Psittacus cyanolyseos, Molina, Saggio Stor. Nat. Chili, pp. 256, 343 (1782) (descr. falsa); Gm. S. N. i. p. 343, n. 118 (1788); Lath. Ind. Orn. i. p. 127, n. 134 (1790); Bechst. Lath. Ueb. p. 101 (1811–12); Vieill. N. D. xxv. p. 329 (1817); Kuhl, Consp. Psitt. p. 96 (1820); Vieill, Enc. Méth. iii. p. 1375 (1823); Pöpp. Reise in Chili, i. p. 451 (1835); id. Wiegm. Arch. 1835, i. p. 87; id. Fror. Not. xliv. p. 24 (1844); Thienem. Fortpfl. d. ges. Vog. p. 77, t. xiv. f. 15 (egg) (1846).

Thecan Parrot, Lath. Syn. Suppl. ii. p. 94 (1802); id. Gen. Hist. ii.

p. 216 (1822).

Psittacara patagonica, Less. et Garn. (nec Vieill.) Voy. Coq., Zool. i. pp. 241, 625, pl. 35 bis (Chili) (1826-28); Lear, Parr. pl. 10 (1832); Bourj. Perr. pl. 19 (Chili) (1837–38).

Psittacus (Aratinga) byroni, Childr. Gray's Zool. Misc. p. 12

(1831).

Arara patagonica, part., Less. Tr. d'Orn. p. 187 (Chili) (1831); Selby, Nat. Libr., Parrots, p. 79 (partim), pl. iv. (1836).

Sittace patagonica, part., Wagl. Mon. Psitt. p. 659 (1832); Hartl. Syst. Verz. Ges. Mus. p. 86 (1844).
Conurus eyanolysios, Fraser, P. Z. S. 1843, p. 114; Boeck, Naumannia, 1855, p. 506; Cass. Un. St. Astron. Exp. ii. p. 189 (1865).

Psittacus patachinus, Vig., fide Fraser, P. Z. S. 1843, p. 114.

Conurus cyanolyseos, part., G. R. Gr. Gen. B. ii. p. 413, n. 5 (1845); Gay, Hist. Chili, Zool. i. p. 367 (1847); Hartl. Journ. f. Orn. 1857, p. 39; Phorsf. & Moore, Cat. B. Mus. E. I. Co. ii. p. 631 (1856-58); G. R. Gr. List Psitt. Brit. Mus. p. 34 (syn. emend.) (1859) (Chili); Sclat. Cat. Am. B. p. 346, n. 2063 (Chili) (1862); id. P. Z. S. 1864, p. 160; Schleg. Mus. P.-B. Psittaci, p. 9 (Chili) (1864); Schlet. P. Z. S. 1867, p. 328, 1870, p. 665 (Chili); Schleg. Mus. P.-B. Psittaci, Revue, p. 3 (Chili) (1874). Cyanolyseus patagonus, part., Bp. Rev. et Mag. de Zool. 1854, p. 150,

n. 28; Souancé, Rev. et Mag. de Zool. 1856, p. 60 (Chili); Bp. Naumannia, 1856, Consp. Psitt. n. 29 (partim); Sousa, Mus. Nac. Lisboa, Psittaci, p. 8 (1869); G. R. Gr. Hand-list, ii. p. 147,

n. 8105 (Chili) (1870).

Compute patagonus, part., Finsch, Papag. i. p. 444 (1862); Gieb. Thes. Orn. i. p. 765 (partim) (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 111, n. 1 (partim) (1873); Rehnw. (nec Vieill.) Vogelbild. t. ii. f. 7 (1878-83); Salv. (nec Vieill.) Cat. B. Strickl. Coll. p. 465 (1882).

Conurus cyanolyseus, Sclat. & Salv. Ibis, 1868, p. 187.

Conurus byroni, Selat. P. Z. S. 1873, p. 761; Rehnw. Journ. f. Orn. 1881, p. 277 (Consp. Psitt. p. 165); id. Vogelbild. Nachtr. 83 (1883); Selat. List Vert. An. 8th ed. p. 341 (1883).

Adult. Very similar to C. patagonus, only much larger, and with the whitish band across the breast better defined and perhaps Total length 20 inches, wing 10.6, tail 10.6, bill always present. 1·35, tarsus 0·9.

Hab. Chili.

a. Ad. sk. Chili. Lord Byron [P.]. (Type of species.) b. Ad. sk. Chili. Rev. H. Hennah [P.]. c. ♂ ad. sk. Santia
 d. Ad. sk. Chili (
 e. Ad. sk. [Pata]
 f. Skeleton. Chili.

Santiago, Chili (Weishaupt). Chili (H. Barclay). [Patagonia?] Salvin-Godman Coll. Salvin-Godman Coll. Sclater Coll.

9. GNATHOSITTACA.

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Range. Colombia and Ecuador.

#### 1. Gnathosittaca icterotis.

Conurus icterotis, Mass. et Souancé, Rev. et Mag. de Zool. 1854, p.71; G. R. Gr. List Psitt. Brit. Mus. p. 33 (1859); Finsch, Papag. i. p. 449 (1867); Gieb. Thes. Orn. i. p. 763 (1872); Schat. & Salv. Nomencl. Av. Neotrop. p. 111, n. 2 (1873); Schleg. Mus. P.-B. Psittaci, Revue, p. 4 (1874); Rehnw. Journ. f. Orn. 1881, p. 278 (Consp. Psitt. p. 166); id. Vogelbild. Nachtr. 83 a (1883); Berl. Journ. f. Orn. 1884, p. 320.

Psittacara icterotis, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 25; Souancé, Rev. et Mag. de Zool. 1856, p. 59; Bp. Naumamia, 1856, Consp. Psitt. n. 19; Souancé, Icon. Perr. pl. xix. (1857).

Ognorhynchus icterotis, Ep., fide G. R. Gr. List Psitt. Brit. Mus. p. 33 (1859); G. R. Gr. Hand-list, ii. p. 146, n. 8098 (1870). Conurus (Gnathosittaca) heinei, Cab. Journ. f. Orn. 1864, p. 414. Gnathosittaca heinei, Cab. l. c.

Adult. Green; forehead, lores, cheeks, all round the base of the lower mandible to the chin, and ear-coverts yellow, the ear-coverts brighter, and the cheeks tinged with green; lower parts and smaller under wing-coverts yellowish green; under tail-coverts green; greater under wing-coverts and quills below olive; quills dusky towards their tips and on the outer webs; tail green above, brown-red below, with an olive tinge towards the tip and on the outer webs of the feathers: naked skin round the eyes brown (?); bill horn-brown, with the tip of the upper mandible whitish; feet blackish. Total length about 17 inches, wing 9, tail 8·8, bill 1·45, tarsus 0·6.

Hab. New Granada and Ecuador.

a. Ad. sk. N	ew Granada.	Massena Coll.
b. Ad. sk. N	ew Granada.	(Type of species.) Purchased.
c. Ad. sk. B	Bogota (Trübner).	Sclater Coll.
d. Ad. sk. B e. Ad. sk. In	Bogota ( <i>Trübner</i> ). ntaj, Ecuador ( <i>Buckley</i> ).	Salvin-Godman Coll. Salvin-Godman Coll.

#### HENICOGNATHUS.

Туре.

P	sittacaria (errore), Meyen, Nova Acta Acad. Leop	
	Car. Suppl. i. des 16ten B. p. 95 (1834)	
L	eptorhynchus, Sw. Class. B. ii. p. 300 (1837) (nec	
	Ménétriés, 1835; Dubus, 1835)	
E	nicognathus, G. R. Gr. Gen. B. p. 51 (1840) (nec	
	Duméril & Bibron, 1854)	
S	tylorhynchus, Less. Echo du Monde savant, 1842,	
	p. 211	H. leptorhynchus.
$\mathbf{H}$	lenicognathus, Agassiz, Nomencl. Zool. Ind. Univ.	<i>I J</i>
	p. 178 (1846).	
H	lylorhynchus, Aliq., fide G. R. Gr. List Gen. & Sub-	
	gen. B. p. 87 (1855)	H. leptorhynchus.

Range. Chili.

### Henicognathus leptorhynchus.

Psittacara leptorhyncha, King, P. Z. S. 1830, p. 14; id. Phil. Mag. & Ann. of Philos. 1831, p. 63; Lear, Parr. pl. 11 (1832); Less. Compl. de Buff. ix. p. 202 (1837); Cass. Un. St. Astron. Exped. ii. p. 189 (1855).

Sittace leptorhyncha, Wagl. Mon. Psitt. p. 646 (1832).

Psittacaria rectirostris, Meyen, Nova Acta Acad. Leop.-Car. Suppl. i. des 16ten Band, p. 95, t. xv. (1834).

Leptorhynchus ruficaudus, Sw. Class. B. ii. p. 300 (1837).

Psittacara leptorhynca, Bourj. Perr. pl. 21 (1837–38).

Psittacus rectirostris, Hahn, Orn. Atl., Papag. p. 90, t. 75 (1840). Enicognathus leptorhynchus, G. R. Gr. List Gen. B. p. 51 (1840); id. op. cit. 2nd ed. p. 67 (1841); Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); G. R. Gr. Gen. B. ii. p. 414 (1845); Gay, Hist. Chili, Zool. i. p. 370 (1847); Bp. Consp. Av. i. p. 1 (1850); Bibra, Denkschr. d. k. Ak. Wiss. zu Wien, v. 2, p. 130 (1853); Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 28; Boeck, Naumannia, 1855, p. 506; Souancé, Rev. et Mug. de Zool. 1856, p. 60; Bp. Naumannia, 1856, Consp. Psitt. n. 32; G. R. Gr. List Psitt. Brit. Mus. p. 48 (1859); Sousa, Mus. Nac. Lisbon, Psittaci, p. 8 (1869); G. R. Gr. Hand-list, ii. p. 151, n. 8166 (1870).

Arara erythrofrons, Less. Rev. Zool. 1842, p. 135.

Psittacara cheroyeus, Fraser, P. Z. S. 1843, p. 114. Conurus erythrofrons, G. R. Gr. Gen. B. ii. p. 414, n. 35 (1845); Gay, Hist. Chili, Zool. i. p. 369 (1847); Boeck, Naumannia, 1855, p. 507.

Stylorhynchus erythrofrons, Less. Echo du Mond. sav. 1842, p. 211;

id. Descr. Mamm. et Ois. p. 187 (1847).

Henicognathus leptorhynchus, Zuchold, Journ. f. Orn. 1855, p. 55; Sclat. Cat. Am. B. p. 345, n. 2062 (1862); Finsch, Papag. i, p. 432 (1867); Sclat. P. Z. S. 1867, p. 328, 1870, p. 665; Sund. Meth. nat. Av. disp. Tent. p. 70 (1872); Sclat. § Salv. Nomencl. Av. Neotrop. p. 111 (1873); Gieb. Thes. Orn. ii. p. 322 (1875); Rchnw. Vogelbild. t. xxii. f. 8 (1878-83); id. Journ. f. Orn. 1881, p. 284 (Consp. Psitt. p. 172); Salv. Cat. B. Strickl. Coll. p. 464 (1882); Sclat. List Vert. An. 8th ed. p. 341 (1883).

Conurus leptorhynchus, Schleg. Mus. P.-B. Psittaci, p. 22 (1864); id. op. cit., Revue, p. 6 (1874).

Adult male. Dull green, a little brighter on the head, each feather slightly edged with dusky, the feathers of the pileum with broader dusky edges; forehead, lores, and a small ring round the naked skin surrounding the eyes dull crimson; an obsolete dull red patch on the middle of the abdomen; bastard-wing and primary-coverts bluish green; primaries green, tinged with bluish towards the tips, first primary blackish, bluish towards the tip of the inner web; greater under wing-coverts and primaries underneath greyish black, tinged with greenish on the inner webs; tail dull red, with the tip of the feathers greenish: bill and feet lead-colour; iris orange. Total length 15 inches, wing 8.5, tail 6.8, bill 1.35, tarsus 0.68.

Female. Like the male. Hab. Chili.

<ul><li>a. Ad. sk.</li><li>b. Ad. sk.</li><li>c. Ad. sk.</li><li>d. Ad. sk.</li><li>e. Skeleton</li></ul>	Chili. Chili. Chili. Chili. Chili.	The Admiralty [P.]. Sclater Coll. Salvin-Godman Coll. Lord Byron [P.].
f. Skeleton.		

#### 11. MICROSITTACE.

Type.

Range. From Chili to the Straits of Magellan.

### 1. Microsittace ferrugineus.

Perruche des terres Magellaniques, D'Aubent. Pl. Enl. 85. Psittacus ferrugineus, Müll. S. N. Suppl. p. 75, 6 g (1776); Cass. Pr.

Ac. Philad. 1864, p. 239. Perriche émeraude, Buff. Hist. Nat. Ois. vi. p. 262 (1779).

Emerald Parrot, Lath. Syn. i. p. 230 (1781); id. Gen. Hist. ii. p. 151 (1822).

Psittacus smaragdinus, Gm. S. N. i. p. 322, n. 68 (1788); Lath. Ind. Orn. i. p. 94, n. 36 (1790); Shaw, Gen. Zool. viii. 2, p. 406 (1811); Bechst. Kurze Ueb. p. 72 (1811–12); Vieill. N. D. xxv. p. 364 (1817); Kuhl, Consp. Psitt. p. 93 (1820); Vieill. Enc. Méth. iii. p. 1398 (1823); Wagl. Mon. Psitt. p. 740 (1832).

La Perruche émeraude, Levaill. Perr. pl. 21 (1801).

Sittace smaragdina, Hartl. Syst. Verz. Ges. Mus. p. 86 (1844). Conurus smaragdinus, G. R. Gr. Gen. B. ii. p. 414, n. 42 (1845); id.

List Psitt. Brit. Mus. p. 47 (1859); Schleg. Mus. P.-B. Psittaci, p. 22 (1864); Finsch, Papag. i. p. 525 (1867); Gieb. Thes. Orn. i. p. 767 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 27 (1873): iid. P. Z. S. 1874, p. 434; Schleg. Mus. P.-B. Psittaci,

Revue, p. 6 (1874); Sclat. & Salv. Voy. Chall., Birds, p. 104 (1881); Sclat. List Vert. An. 8th ed. p. 344 (1883).

Conurus (Dasyrrhinus) pyrrhurus, Rehnb. MS. in Mus. Dresd. Conurus pyrrhurus, Rchnb., v. Briba, Denkschr. d. k. Acad. Wiss. zu Wien, v. 2, p. 130 (1853); Zuchold, Journ. f. Orn. 1855, p. 56.

Comunis phenicurus, Licht. (nec Natt.?) Nomencl. As. p. 73 (1854).
Microsittace smaragdina, Bp. Rev. et Mag. de Zool. 1854, p. 150,
n. 47; Souancé, Rev. et Mag. de Zool. 1856, p. 61; Bp. Naumannia, 1856, Consp. Psitt. n. 33; Sousa, Mus. Nac. Lisboa, Psittaci, p. 9 (1869).

Psittacara smaragdina, Cass. Un. St. Astron. Exp. ii. p. 189 (1855). Conurus smaragdineus, Sclat. Cat. Am. B. p. 349, n. 2082 (1862); id. P. Z. S. 1867, pp. 328, 338,

Microsittace ferrugineus, G. R. Gr. Hand-list, ii. p. 151, n. 8165 (1870).

Pyrrhura smaragdina, Rehnw. Vogelbild. t. xxii. f. 3 (1878-83); id. Journ. f. Orn. 1881, p. 286 (Consp. Psitt. p. 174).

Conurus eyanolyseos, Sulvin (nec auct.), P. Z. S. 1883, p. 426 (Straits of Magellan).

Adult male. Dull green; the crown with a slight bluish tinge; each feather slightly edged with dusky, those of the crown with broader black edges; forehead, lores, and a patch on the middle of the abdomen dull brown-red; primaries and their coverts green, with a slight bluish tinge; greater under wing-coverts and quills underneath grevish black, with an olive-tinge on the inner webs; tail brown-red, with the tips of the feathers greenish: bill and feet blackish; iris yellow. Total length about 13 inches, wing 7.2, tail 6, bill 0.8, tarsus 0.62.

Female. Like the male.

Hab. Chili and Straits of Magellan.

a. Ad. st.	Chili.	The Admiralty [P.].
b. Ad. sk.	Chili.	The Admiralty P.
c. Ad. sk.	Chili.	Sclater Coll.
d. Ad. sk.	Chili (Reed).	Salvin-Godman Coll.
e. ♂ ad. sk.	Sandy Point, Straits of	Salvin-Godman Coll.
	Magellan, August (Capt.	
	A. H. Markham).	
$f, g, h. \ \beta \ $ ad. sk.	Sandy Point, Straits of	'Challenger' Expe-

 $f, g, h. \exists \ \$ ad. sk.

Sandy Point, Straits of ' Challenger Magellan. dition [C.].

#### 12. PYRRHURA.

Type. Aratinga, Bp. (nec Spix) Rev. et Mag. de Zool. 1854, p. 150 P. cruentata. Pyrrhura, Bp. Naumannia, 1856, Consp. Psitt. gen. 14. P. vittata.

Range. From Costa Rica to South America, as far as Southern Brazil and Northern Argentine Republic.

# Key to the Species.

a. A brown-red patch on the lower back.
a'. Breast blue, with no transverse bars cruentata, p. 213.
b'. Breast with transverse bars, or scale-like
appearance.
a'. Breast with transverse bars.
a". Cheeks, pileum, and bend of the wing
greenvittata, p. 214.
b". Cheeks maroon, bend of the wing red.
a <sup>4</sup> . Pileum brown, with a very slight
tinge of blue, if any, on the forehead. & leucotis, p. 216.
bue emma, p. 217.
blue emma, p. 217. b". Breast and throat with a scale-like
appearance.
c'''. Bend of the wing crimson; upper part
of the cheeks maroon, lower part of the
same and forehead dull blue y picta, p. 217.
d"'. Bend of the wing with very little red,
if any; pileum, lores, and cheeks red
in the adult birds; the young bird with
no red on the head and with the blue
forehead resembles very much $P$ .
picta, but has no red on the bend of
the wing luciani, p. 219.
b. No brown-red patch on the lower back.
c'. With distinct pectoral bars.
c". Lower breast and abdomen green; often
a more or less distinct brown-red patch
in the middle of the abdomen.
e'''. Under wing-coverts in the adult birds
orange egregia, p. 221.
f'''. Under wing-coverts green.
c <sup>4</sup> . Ear-coverts brown - red; breast
brown; bastard-wing and primary-
coverts yellow, more or less tinged with red
with red
a <sup>5</sup> . Tail above dusky reddish brown.
a <sup>6</sup> . Primary-coverts red, tipped with
yellow melanura, p. 222.
b <sup>6</sup> . Primary-coverts and bastard-
wing scarlet, with no yellow.
$a^7$ . Hoary edges of the throat and
breast-feathers narrow souancei, p. 223.
b. Hoary edges of the throat and
breast-feathers very broad berlepschi, p. 224.
b <sup>5</sup> . Tail above green; bastard-wing
and primary-coverts scarlet rupicola, p. 224.
e <sup>4</sup> . Ear-coverts dusky grey; tail coppery
red molinæ, p. 225.
g'''. Under wing-coverts red.
f <sup>4</sup> . Cheeks green; tail above and below olive
olive deviller, p. 226.

 $g^4$ . Cheeks bluish; tail above coppery red, underneath dark brown, with the inner edges of the feathers coppery red ..... perlata, p. 227. d". Lower breast and abdomen bright crimson, like the under wing-coverts; upper part of the cheeks olive-green, lower dull blue rhodogaster, p. 228. d'. With no distinct pectoral bars; ear-coverts red.  $e^{\prime\prime}$ . Tail coppery red. h"". Bastard-wing and primary-coverts blue; forehead and vertex brown, the feathers edged with dull blue; occiput olive-green.....i'''. Bastard-wing and primary-coverts hæmatotis, p. 229. white in the adult bird, blue in the young one; pileum rosy red ..... rhodocephala, p. 229. f". Tail above olive, underneath reddish brown; base of the quills yellow ..... hoffmanni, p. 230.

#### 1. Pyrrhura cruentata.

Psittacus cruentatus, Neuwied, Reise n. Brus. i. pp. 53, 72 (1820), ii. pp. 147, 341 (1821); Temm. Pl. Col. 338 (57¢ livr. 1825); Less. Man. d'Orn. ii. p. 149 (1828); Neuw. Beitr. iv. p. 183 (1832). Psittacus erythrogaster, Licht. Mus. Berol., fide Kuhl, Consp. Psitt. p. 20 (1820); Licht. Verz. Doubl. p. 7 (1823).

Sanguine Parrakeet, Lath. Gen. Hist. ii. p. 177 (1822).

Aratinga cyanogularis, Spix, Av. Bras. i. p. 33, t. xvii. (1824); Steph. Gen. Zool. xiv. p. 137 (1826); Brehm, Mon. d. Papay. t. 19. Psittacara lichtensteinii, Vig. Zool. Journ. ii. p. 390 (1825); Steph. Gen. Zool. xiv. p. 117 (1826); Voigt, Cuv. Vebers. p. 727 (1831). Psittacus vigorsii, Desm. Dict. Sc. Nat. xxxix. p. 32 (note) (1826). Conurus tiriba, Less. Tr. d'Orn. p. 213 (1831).

Sittace cruentata, Wayl. Mon. Psitt. p. 648 (1832); Hartl. Syst.

Verz. Ges. Mus. p. 86 (1844). Psittacara tiriba, Bourj. Perr. pl. 25 (1837-38).

Conurus cruentatus, G. R. Gr. Gen. B. ii. p. 413, n. 15 (1845); Burm. Syst. Ueb. ii. p. 176 (1856); G. R. Gr. List Psitt. Brit. Mus. p. 39 (1859); Sclat. Cat. Am. B. p. 349, n. 2083 (1862); Schleg. Mus. P.-B. Psittaci, p. 23 (1864); Finsch, Pupag. i. p. 527 (1867); Pelz. Orn. Bras. pp. 259, 446, lii (1871); Gieb. Thes. Orn. i. p. 761 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 28 (1873); Garrod, P. Z. S. 1873, p. 465; Schley. Mus. P.-B. Psittaci, p. 6 (Surinam!) (1874); Salv. Cat. B. Strickl. Coll. p. 466 (1882); Sclat. List Vert. An. 8th ed. p. 345 (1883); Allen, Bull. Am. Mus. Nat. Hist. ii. p. 263 (1889).

Aratinga cruentata, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 45;

Souancé, Rev. et Mag. de Zool. 1856, p. 61; Sousa, Mus. Nac.

Lisboa, Psittaci, p. 9 (1869).

Pyrrhura cruentata, Bp. Naumannia, 1856, Consp. Psitt. n. 43; G. R. Gr. Hand-list, ii. p. 148, n. 8124 (1870); Rehnw. Vogelbild.

t. xxii, f. 1 (1878-83); id. Journ. f. Orn. 1881, p. 287 (Consp. Psitt. p. 175). Microsittace cruentata, Cab. Journ. f. Orn. 1874, p. 228.

Adult. Green; pileum and nape brown-black, the feathers, especially on the nape, narrowly edged with ochreous yellow; frontal edge, lores, a ring round the eyes, and ear-coverts brown-red; on the sides of the neck a yellow-orange patch; cheeks and chin green; throat and a narrow collar round the lower part of the hind neck blue; a broad dark red patch on the lower back and rump, a brighter one on the middle of the abdomen; bend of the wing crimson; bastard-wing and primary-coverts green, tinged with blue, especially on the inner webs; outermost primaries blue, edged with green on the outer webs, olive on the inner webs; innermost primaries and secondaries green; quills underneath grey, their inner webs towards the base and greater under wing-coverts olive; tail above olive, the lateral tail-feathers tinged with brown-red on their inner webs; tail underneath brown coppery red, the tips of the feathers olive: bill horn-brown; feet dusky; iris yellow orange. Total length about 11.5 inches, wing 6.2, tail 5.5, bill 0.7, tarsus 0.58.

Female. Like the male.

Young. Duller; less red colour on the bend of the wing. Hab. South-eastern Brazil, from Bahia to Rio Janeiro.

The last two specimens mentioned below have the tail-feathers more pointed and with no red tinge above towards the tips and on the inner webs.

a. Ad. sk.	[River Amazons.]	Purchased.
b. Ad. sk.	Brazil.	Lord Stuart de Roth-
A 3 - 3-	D	say [P.]. Sclater Coll.
c. Ad. sk.	Brazil.	
d, e. Ad. sk.	Bahia, Brazil (Wucherer).	Salvin-Godman Coll.
f. 3 ad. sk.	Registro do Sai, Brazil (Nat-	Salvin-Godman Coll.
	terer).	

# 2. Pyrrhura vittata.

La Perruche Ara à bandeau rouge, Levaill. Perr. pl. 17 (1801).

? Chiripepé, *Azara*, *Apunt*. n. 281 (1803).

Psittacus vittatus, Shaw, Gen. Zool. viii. 2, p. 404 (1811); Kuhl, Consp. Psitt. p. 21 (1820); Voigt, Cuv. Vebers. p. 726 (1831); Hahn, Orn. Atl., Papay. p. 37, t. 21 (pess.) (1834). Psittacus frontalis, Vieill. N. D. xxv. p. 361 (1817); id. Enc. Meth.

iii. p. 1396 (1823).

? Psittacus chiripepé, Vieill. N. D xxv. p. 361 (1817).

Psittacus undulatus, Illig. in Mus. Berol., fide Kuhl, Consp. Psitt. p. 21 (1820); Licht. Verz. Doubl. p. 7 (1823); id. Nomencl. Av. p. 73 (1854).

Bauded Parrot, Lath. Gen. Hist. ii. p. 115 (1822).

Aratinga fasciatus, Spix, Ar. Bras. i. p. 35, t. xxi. figs. 1, 2 (1824); Steph. Gen. Zool. xiv. p. 138 (1826); Brehm, Mon. d. Papag. t. 25, figs. 1, 2.

Psittacara vittatus, Vig. Zool, Journ. ii. p. 389 (1825); Steph. Gen.

Zool. xiv. p. 116 (1826).

Conurus vittatus, Less, Tr. d'Orn. p. 213 (1831); G. R. Gr. Gen. B. ii. p. 414, n. 23 (1845); Burm. Syst. Ueb. ii. p. 178 (1856); G. R. Gr. List Psitt. Brit. Mus. p. 40 (1859); Sclat. Cat. Am. B. p. 349 n. 2084 (1862); Schleg. Mus. P.-B. Psittaci, p. 24 (1864); Finsch, Papag. i. p. 530 (1867); Pelz. Orn. Bras. pp. 259 446 lii (1871); Hamilt. Ibis, 1871, p. 308; Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 29 (1873); Schleg. Mus. P.-B. Psittaci, Revue, p. 6 (Venezuela!) (1874); Salv. Cat. B. Strickl. Coll. p. 466 (1882); Sclat. List Vert. An. 8th ed. p. 344 (1883); Berl. u Jhering, Zeitschr. f. ges. Orn. 1885, p. 163; Perl. Journ. f. Orn. 1887, pp. 25, 121 (Paraguay).

Sittace vittata, Wagl. Mon. Psitt. p. 641 (1832); Hartl. Syst. Verz.

Ges. Mus. p. 86 (1844).

Microsittace vittata, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 50; Souancé, Rev. et Mag. de Zool. 1856, p. 62; Sousa, Mus. Nac. Lisboa, Psittaci, p. 9 (1869); Cab. Journ. f. Orn. 1874, p. 228.

Pyrrhura vittata, Bp. Naumannia, 1856, Consp. Psitt. n. 34; G. R. Gr. Hund-list, ii. p. 148, n. 8125 (1870); Rchnw. Vogelbild. t. xxii. f. 2 (1878-83); id. Journ. f. Orn. 1881, p. 286 (Consp. Psitt. p. 174).

Adult male. Green; a narrow frontal band chestnut, sometimes with one or two small red feathers; throat and breast olive, with yellowish-olive and dusky cross bars on the edges of the feathers; cheeks green; a greenish-brown spot on the ear-coverts; the feathers of the lower back with brown-red edges, forming a brown-red patch; a patch of the same colour on the middle of the abdomen; green feathers of the sides with obsolete dusky edges; primarycoverts green, slightly tinged with bluish; outermost primaries blue, edged with green on the outer webs and tinged with green towards the tip; innermost primaries like the secondaries, green; greater under wing-coverts and quills underneath blackish grey, tinged with olive on the inner web; tail green, more or less coppery red towards the tip and on the inner web of the feathers; tip of the tail-feathers green; tail-feathers below brown-red, slightly tipped with greenish: bill dusky; feet grey; "iris reddish" (Joyner). Total length 10.6 inches, wing 5.2, tail 5, bill 0.65, tarsus 0.4.

Female. Like the male, but perhaps with the tail less reddish.

Hub. South-eastern Brazil and Paraguay.

In some specimens there are hoary spots, edged with dusky,

more or less distinct, on the occiput and nape.

Brazil.

Graf von Berlepsch suspects that the Paraguayan bird (Psitta-cus chiripepé, Vieill.) may be different from the true P. vittata.

a. Ad. sk. b. Ad. sk. c. ♂ ad. sk. d. Ad. sk.

Brazil. Sao Paulo, Brazil (*Joyner*). [Cavenne.]

[Cayenne.]
Curytiba, Brazil, November
(Natterer).

Purchased. Sclater Coll. Salvin-Godman Coll. Salvin-Godman Coll. Salvin-Godman Coll.

Purchased.

e. ♀ ad. sk.f. Ad. sk.

### 3. Pyrrhura leucotis.

Psittacus leucotis, Licht. in Mus. Berol.; Kuhl, Consp. Psitt. p. 21 (1820); Neuwied, Beitr. iv. p. 188 (1832).

Aratinga ninus, Spir, Ar. Bras. i. p. 34, t. xix. f. 2 (1824); Steph. Gen. Zool. xiv. p. 138 (1826); Brehm, Mon. d. Papay. t. 18 (1842). Psittacara leucotis, Vig. Zool. Journ. ii. p. 389 (1825); Steph. Gen. Zool. xiv. p. 116 (1826).

Sittace leucotis, Wayl. Mon. Psitt. p. 64 (1832); Hartl. Syst. Verz.

Ges. Mus. p. 86 (1844).

Psittacara ninus, Bourj. Perr. pl. 28 (1837-38).

Conurus leucotis, G. R. Gr. Gen. B. ii. p. 414, n. 24 (syn. emend.) (1845); Burm. Syst. Ueb. ii. p. 177 (1856); G. R. Gr. List Psitt. Brit. Mus. p. 41 (1859); Sclat. Cat. Am. B. p. 349, n. 2085 (1862); Schleg. Mus. P.-B. Psittaci, p. 24 (1864); Finsch, Papag. i. p. 535 (1867); Pelz. Orn. Bras. pp. 259, 446, lii (1871); Gieb. Thes. Orn. i. p. 764 (1872); Brehm, Journ. f. Orn. 1872, p. 75; Sclat. & Salv. Nomenel. Av. Neotrop. p. 112, n. 33 (1873); Schleg. Mus. P.-B. Psittaci, Revuc, p. 6 (1874); Salv. Cat. B. Strickl. Coll. p. 466 (1882); Sclat. List Vert. An. 8th ed. p. 345 (1883); Pelz. u. Lor. Ann. d. naturh. Hofmus. iii. p. 38 (1888).

Microsittace leucotis, Bp. Rev. et May. de Zool. 1854, p. 150, n. 48; Sonancé, Rev. et May. de Zool. 1856, p. 62; Sousa, Mus. Nac.

Lisboa, Psittaci, p. 9 (1869).

Pyrrhura leucotis, Bp. Naumannia, 1856, Consp. Psitt. n. 39; G. R.
Gr. Hand-list, ii. p. 149, n. 8129 (1870); Rehnw. Vogetbild.
t. xxviii. f. 8 (1878-83); id. Journ. f. Orn. 1881, p. 338 (Consp. Psitt. p. 178).

Adult. Green; crown and nape brown-black; a collar on the lower part of the hind neck blue; a narrow frontal edge, lores, periocular region, and cheeks chestnut; ear-coverts dirty white; throat dull bluish; upper breast green, each feather with two bands at the tip, one whitish grey and the other blackish on the edge; a dark red patch from the lower back to the upper tail-coverts, and another of the same colour on the middle of the abdomen; bend of the wing red; bastard-wing and primary-coverts greenish blue; primaries blue on the outer webs; smaller under wing-coverts green, the greater ones and the quills below blackish, with an olive tinge; tail above brown-red, with the base of both webs of the two central tail-feathers and of the outer web of the lateral ones green; tail below coppery brown-red: bill horn-brown; feet dusky. Total length 8·3 inches, wing 4·4, tail 4·3, bill 0·58, tarsus 0·4.

Hab. Eastern Brazil.

a. Ad. sk.	Ceará, North Brazil (W. Jesse).	Salvin-Godman Coll.
b. Ad. st.	Brazil.	Lord Stuart de Roth-
		say [P.].
c. Ad. sk.	S.E. Brazil (Ward).	Sclater Coll.
d. Ad. sk.	Brazil.	Purchased.
e. Ad. sk.	Bahia (Wucherer).	Salvin-Godman Coll.
f. Ad. sk.	Brazil.	Massena Coll.

g. Ad. sk. h. Ad. sk. i-o. Ad. sk.

Brazil.

Massena Coll. Purchased. Purchased.

### 4. Pyrrhura emma. (Plate I.)

Conurus cyanopterus, Sclat. & Salv. (nec Bodd.), P. Z. S. 1868, p. 169 (Caripé).

Very much like C. leucotis, but larger, with the sinciput entirely blue and the lower part of the cheeks tinged with bluish more conspicuously than in that species; also the throat more decidedly bluish; often the light bands on the throat and breast are broader than in P. leucotis. Total length about 9.3 inches, wing 4.8-4.6, tail 4.7, bill 0.6, tarsus 0.4.

Hab. Venezuela (and Trinidad?).

This species also much resembles P. picta in the colouring of the head: but the latter has the throat and breast with a scalelike appearance.

a. Ad. sk. Massena Coll. Venezuela (Spence). Sclater Coll. b. Ad. sk. Salvin-Godman Caraccas, Venezuela (A. c. ♂ ad. sk. (Types of Coll. Goering). Caripé, Venezuela, June ul. ♂ ad. sk. Salvin-Godman species.) Coll. (A. Goering). Sclater Coll. e. & ad. sk. Caripé, Venezuela (A. Goering). f,g,h. Ad. sk. Trinidad ? Purchased.

# 5. Pyrrhura picta.

Anaca, Marcgr. Hist. Bras. ix. p. 207 (1648).

Psittacula brasiliensis fusca, Briss. Orn. iv. p. 403 (1760).

Perruche à gorge tachetée de Cayenne, Daubent. Pl. Enl. 144.

Psittacus pictus, Müll. S. N. Suppl. p. 25, 61 (1776); Cass. Pr. Ac. *Philad.* 1864, p. 239.

Perriche à gorge variée, Buff. Hist. Nat. Ois. vi. p. 259 (1779). Wave-breasted Parrakeet, Lath. Gen. Syn. i. p. 245 (1781); id. Gen. Hist. ii. p. 168 (1822).

Scaly-breasted Parrakeet, Lath. Gen. Syn. i. p. 246 (1781); id. Gen. Hist. ii. p. 169 (1822).

Chestnut-crowned Parrakeet, Lath. Gen. Syn. i. p. 314 (1781); id.

Gen. Hist. ii. p. 268 (with var. A) (1822). Psittacus lyanopterus (sic), Bodd. Tabl. Pl. Enl. p. 9 (nec Psit-

tacus cyanopterus, p. 27) (1783).

Orn. i. p. 101, n. 52 (1790); Shaw, Gen. Zool. viii. 2, p. 405 (1811); Bechst. Kurze Ueb. p. 78 (1811–12); Vieill. N. D. xxv. p. 365 (1817); Kuhl, Consp. Psitt. p. 22 (partim) (1820); Vieill.

Enc. Méth. iii. p. 1398, pl. 224. f. 2 (1823); Voiyt, Cuv. Uebers.

p. 726 (1831).

Psittacus anaca, Gm. S. N. i. p. 349, n. 129 (1788); Lath. Ind. Orn.
i. p. 131, n. 149 (1790); Shaw, Gen. Zool. viii. 2, p. 554 (1811);
Bechst. Kurze Ueb. p. 105 (1811-12); Vieill. N. D. xxv. p. 360 (1817); id. Enc. Méth. iii. p. 1395 (1823); Licht. Abh. Berl. Ak. 1816-17, p. 167.

Psittacus squammosus, Lath. Ind. Orn. i. p. 101 (1790); Shaw, Gen.
Zool. viii. 2, p. 405 (1811); Bechst. Kurze Ueb. p. 78 (1811);
Shaw, Nat. Misc. pl. 1061 (1813); Vieill. N. D. xxv. p. 363 (1817);
id. Enc. Méth. iii. p. 1397 (1823); Wagl. Mon. Psitt. p. 742 (Av.

dub. sp. 13) (1832).

La Perruche Ara à gorge variée, Levaill. Perr. i. pl. 16 (1801).

Psittacus maculatus, Donor. Nat. Reposit. i. pl. 33 (1823).

Psittacara versicolor, Vig. Zool. Journ. ii. p. 389 (1825); Steph. Gen. Zool. xiv. p. 116 (1826).

Psittacara squamosus, Viy. Zool. Journ. ii. p. 389 (1825); Steph. Gen.

Zool. xiv. p. 115 (1826).

Conurus versicolor, Less. Tr. d'Orn, p. 213 (1831); Cab. in Schomb.
Guian, iii, p. 728 (1848); Le Maout, Hist. Nat. Ois. pl. 12 (1853);
Lieht. Nomenel. Av. p. 73 (1854); Burm. Syst. Ueb. ii. p. 176 (1856).

Sittace anaca, Wagl. Mon. Psitt. p. 647 (1832).

Conurus squamosus, Württ. Reise nach Nord-Am. p. 73 (1835), fide Hartl. Naumannia, 1852, 2. p. 53; Lieht. Nomenel. Av. p. 73 (1854); Cab. Journ. f. Orn. 1856, p. 106; Gundl. Journ. f. Orn.

1861, p. 415, 1871, p. 271.

Conurus cyanopterus, G. R. Gr. Gen. B. ii. p. 413, n. 19 (1845);
id. List Psitt. Brit. Mus. p. 41 (1859); Sclat. Cat. Am. B. p. 350,
n. 2086 (1862); Schleg. Mus. P.-B. Psittaci, p. 25 (1864);
Finsch, Papag. i. p. 538 (1867); id. P. Z. S. 1870, pp. 554,
586 (Trinidad); Pelz. Orn. Bras. p. 259 (note) (1871); Gueb. Thes.
Orn. i. p. 762 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 112
n. 34 (1873); Schleg. Mus. P.-B. Psittaci, p. 6 (1874); Salv.
Cat. B. Strickl. Coll. p. 466 (1882); Sclat. List Vert. An. 8th ed.
p. 345 (1883); Salv. Ibis, 1886, p. 67.

Aratinga guianensis, Brehm, Mon. d. Papag. t. 28 (1852).

Microsittace versicolor, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 51; Souancé, Rev. et Mag. de Zool. 1856, p. 61.

Microsittace squamata, Bp. Rev. et Mag. de Zool. 1854, p. 150,

n. 59.
Microsittace cyanoptera, Bp. Rev. et Mug. de Zool. 1854, p. 150,

Microsittace cyanoptera, Bp. Rev. et Mug. de Zool. 1854, p. 150, n. 60.

Pyrrhura versicolor, Bp. Naumannia, 1856, Consp. Psitt. n. 41. Pyrrhura squamata, Bp. Naumannia, 1856, Consp. Psitt. n. (?).

Pyrrhura picta, G. R. Gr. Hand-list, ii. p. 149, n. 8133 (1870);
Rehnw. Journ. f. Orn. 1881, p. 387 (id. Consp. Psitt. p. 177); id.
Vogelbild., in the text of t. xxviii. f. 6 (1878-83).

Adult. Green, crown and nape black; forehead, lower part of the cheeks, and an obsolete band on the lower part of the nape blue; upper cheeks chestnut; ear-coverts dirty grey; feathers of the throat and sides of the neck brown or blackish, those of the upper breast greenish, the first, as well as the last, with light greyish broad edges, more or less brown on the throat, or olive on the

breast, producing a scaled appearance; a brown or dark red patch from the lower back to the upper tail-coverts, and another of the same colour, or a little paler, along the middle of the abdomen; bend of the wing red; bastard-wing, primary-coverts, and outer webs of the primaries blue; under wing-coverts green, the greater ones and the quills below blackish with an olive tinge; tail above brown-red, with the base of the outer webs of the feathers green, underneath coppery red, with the outer webs of the feathers darker: bill horn-brown; feet dusky. Total length 9.5 inches, wing 5, tail 4.3, bill 0.63, tarsus 0.45.

Female. Like the male.

Hab. Guiana and Trinidad; according to Finsch also near Para, N. Brazil.

a. Ad. st. British Guiana (Schomburgk). Roy. Geographical Soc. [P.]. Roy. Geographical b, c, d. Ad. sk. British Guiana (Schomburgk). Soc. P. e. Ad. sk. Guiana. Selater Coll. Quongo, Brit. Guiana, October Salvin-Godman Coll. f-i.  $\beta \circ 2$  ad. sk. (Whitely). Takuta River, Brit. Guiana. k. J ad. sk. Salvin-Godman Coll. July (Whitely). l. Ad. sk. Trinidad. Sclater Coll. [R. Amazons.] Purchased. m. Ad. sk.

## 6. Pyrrhura luciani.

Conurus luciani, Deville, Rev. et Mag. de Zool. 1851, p. 210 (juv.); G. R. Gr. List Psitt. Brit. Mus. p. 41 (1856); Schleg. Mus. P.-B. Psittaci, p. 25 (1864); Finsch, Papag. i. p. 541 (1867); Petz. Orn. Bras. pp. 259, 446, lii (1871); Gieb. Thes. Orn. i. p. 764 (1872); Sclat. & Salv. Nomenel. Av. Neotrop. p. 112, n. 35 (1873); iid. P. Z. S. 1873, p. 299; Schleg. Mus. P.-B. Psittaci, Revue, p. 6 (1874); Tacz. P. Z. S. 1874, p. 549; id. P. Z. S. 1882, p. 46; id. Orn. Pér. iii. p. 203, Tabl. p. 99 (1886); Sclat. P. Z. S. 1886, p. 320; Berl. Journ. f. Orn. 1889, p. 316.

Microsittace luciani, Ep. Rev. et Mag. de Zool. 1854, p. 150, n. 49; Souancé, Rev. et Mag. de Zool. 1856, p. 62.

Maracana luciani, O. Des Murs, in Casteln. Voy. Amér. Sud, Ois. p. 14, pl. iii. f. 1 (1855); Hartl. Journ. f. Orn. 1857, p. 42.

Pyrrhura luciani, Bp. Naumannia, 1856, Consp. Psitt. n. 42;
Souaneé, Icon. Perr. pl. xiv. (1857); G. R. Gr. Hand-list, ii.
p. 149, n. 8131 (1870); Rehnw. Vogelbild. t. xxviii. f. 6 (1878-83);
id. Journ. f. Orn. 1881, p. 338 (Consp. Psitt. p. 178).

Comurus roseifrons, G. R. Gr. List Psitt. Brit. Mus. p. 42 (ad.) (1859);
Finsch, Papag. i. p. 534 (1867); Pelz. Orn. Bras. p. 259 (note) (1871); Gieb. Thes. Orn. i. p. 767 (1872); Selat. S. Salv. Nomencl. Av. Neotrop. p. 112, n. 31 (1873); iid. P. Z. S. 1873, p. 299;
Tacz. Orn. Pér. iii. p. 204, Tabl. p. 99 (1886); Berl. Ibis, 1889, p. 181; Gavlepp, Journ. f. Orn. 1889, p. 291; Berl. Journ. f. Orn. 1889, p. 314, Tat. iii. f. 2 (ad.), 2a (jun.), 2b (juv.).

Pyrrhura roseifrons, G. R. Gr. Hand-list, ii. p. 149, n. 8132 (1870);

Rehnw. Journ. f. Orn. 1881, p. 340 (Consp. Psitt. p. 180); id. Vogelbild. Nachtr. 95 (1883).

Conurus phaiogenys, Natt. MS., fide Finsch, Papag. p. 542 (1867).Conurus evanopterus, Sclat. & Salv. (nec Bodd.) P. Z. S. 1867, p. 753;

Finsch, Papag. ii. p. 945 (1868).

Sittace phaiogenys, Natt. Cat. MS., fide Pelz. Orn. Bras. p. 259 (1871).

Adult (type of C. roseifrons). Green; forehead, crown, lores, region round the eyes, and cheeks red; occiput and nape brown; a bluish collar on the lower part of the hind neck; ear-coverts buff; lower back, rump, central upper tail-coverts, and a large patch on the middle of the abdomen brown-red; throat and upper breast with a scaled appearance, the feathers of the throat being brown with buff edges, and those of the upper breast green with buff-olive edges and black shafts; bend of the wings and thighs with some red feathers; bastard-wing, primary-coverts, and primaries blue, secondaries green; all the quills with black edges at the tip; under wing-coverts green, the greater ones and quills below with a slight olive tinge on the inner webs; tail above coppery brown-red, with the base of the feathers green, below darker, with the inner webs redder: bill horn-brown; feet dusky. Total length 9.5 inches, wing 4.9, tail 4.2, bill 0.6, tarsus 0.45.

Young. Crown and nape dark brown; forehead dull blue; checks reddish brown, with a slight bluish tinge on the lower part; bend

of the wings green, with no red feathers.

Birds in transitional stage show more or less red feathers on the forehead.

Hab. Upper Amazons, near the Peruvian Andes.

Graf von Berlepsch has drawn attention to the probability of C. luciani being the young of C. roseifrons, and I think that he is

quite right in his supposition.

The series of specimens in the British Museum, four of them collected by Herr Garlepp at Tarapoto and Shanusi near Yurimaguas, show a gradual transition from the types of C. roseifrons, with the front part of the head red, to the specimens generally called C. luciani.

a, b, c. Ad. sk.	Upper Amazons.	H. W. Bates, Esq. C.
	(Type	s of C. roseifrons, Gray.)
d. 9 imm. sk.	Tarapoto, Peru, April (Gar-	Salvin-Godman Coll.
	lepp).	
e. ♂ imm. sk.	Tarapoto, Peru, April (Gar-	Sclater Coll.
. 0	lepp).	
f. ∂ juv. sk.	Yurimaguas, Peru, Novem-	Salvin-Godman Coll.
J. O J	ber (Garlepp).	
g, h. ♂♀ juv. sk.	Yurimaguas, Peru, October	Sclater Coll.
<i>y</i> , 0 + Jan ca.	(Garlepp).	
i. Juv. st.	R. Amazon,	Massena Coll.
k. ♂ juv. sk.	Chyavetas, E. Peru, July	Salvin-Godman Con.
	(E, Bartlett).	

l, m. ♀ juv. sk. Chamicuros, Peruvian Amazons, July.

n. ♀ juv. sk. Chamicuros, Peruvian Amazons (E. Bartlett).

o. Juv. sk. Peru.

E. Bartlett, Esq. [C.].

Sclater Coll.

Tweeddale Coll.

## 7. Pyrrhura egregia.

Conurus egregius, Sclat. Ibis, 1881, p. 130, pl. iv.; Salv. & Godm. Ibis, 1882, p. 83; Rehnw. & Schal. Journ. f. Orn. 1882, p. 118; Salv. Ibis, 1886, pp. 68, 509.

Pyrrhura egregia, Rchnw. Journ. f. Orn. 1881, p. 287 (Consp. Psitt.

p. 175); id. Vogelbild. Nachtr. 85 (1883).

Adult male. Dark green, pileum more or less brown; cheeks green, ear-coverts and an obsolete spot on the throat reddish brown; throat, sides of the neck, and breast green, each feather with two cross bands at the tip, one light brown, and a second blackish on the very edge; lower breast and abdomen green, the feathers with narrow dusky edges; on the middle of the abdomen a very dark brown-red patch; edge and bend of the wings and smaller under wing-coverts orange-red; bastard-wing yellow, tinged more or less with red; primary-coverts and primaries blue; secondaries green; greater under wing-coverts yellow; quills underneath black; tail above brown-black, with some green colour at the base, below brown, nearly black: bill horn-white; feet dusky. Total length 10 inches, wing 5, tail 4·3, bill 0·68, tarsus 0·45.

Young. Differs from the adult in having only very little red on the bend of the wing and on the smaller under wing-coverts, which are mostly green; greater under wing-coverts blackish, with an olive tinge; bastard-wing blue; cross bands on the throat less

distinct.

Hab. British Guiana.

In some specimens some of the primary-coverts also turn yellow.

a. Ad. sk.	Demerara.	Salvin-Godman Coll. (Type of species.)
b. Ad. sk.	Demerara.	Sclater Coll.
c. ♂ ad. sk.	Roraima, January ( <i>H. Whitely</i> ).	Sclater Coll.
d, e. of ad. et imm.	Roraima, August and December (H. Whitely).	Salvin-Godman Coll.
<i>f</i> − <i>i</i> . ♂♀ imm. sk.	Merumé Mts., June ( $H$ . Whitely).	Salvin-Godman Coll.

# 8. Pyrrhura calliptera.

Conurus callipterus, Mass. & Souancé, Rev. et Mag. de Zool. 1854, p. 72; Bp. Rev. et Mag. de Zool. 1854, p. 147; Sclat. P. Z. S. 1855, p. 162; G. R. Gr. List Psitt. Brit. Mus. p. 42 (1859); Sclat. Cat. Am. B. p. 350, n. 2039 (1862); Schleg. Mus. P.-B. Psittaci, p. 26 (1864); Finsch, Papag. i. p. 554 (1867); Gieb. Thes.
Orn. i. p. 761 (1872); Sclat. & Salv. Nomenel. Av. Neotrop. p. 112,
n. 41 (1873); Schleg. Mus. P.-B. Psittaci, Revue, p. 7 (1874).

Microsittace flavala, Verr. MS., Bp. Rev. et May. de Zool. 1854,

Microsittace calliptera, Bp. Rev. et May. de Zool. 1854, p. 150 n. 53; Souancé, Rev. et Mag. de Zool. 1856, p. 63; Sousa, Mus. Nac. Lisboa, Psittaci, p. 9 (1869).

Pyrrhura calliptera, Bp. Naumannia, 1856, Consp. Psitt. n. 40; Souancé, Ieon. Perr. pl. xvii. (1857); G. R. Gr. Hand-list, ii. p. 149, n. 8133 (1870); Rehnw. Journ. f. Orn. 1881, p. 288 (Consp. Psitt. p. 176); id. Vogelbild. Nachtr. 87 (1883).

Microsittace flavula (errore), Verr., Gieb. Thes. Orn. i. p. 761 (in syn.

C. callipteri) (1872).

Microsittace flaveola (errore), Verr., Rchnw. Journ. f. Orn. 1881,

p. 288 (in syn. P. callipteræ).

Adult. Green; pileum brown, the feathers more or less edged with bluish or green; eheeks green, ear-eoverts brown; throat and upper breast brown with a reddish tinge, each feather with two cross bands at the tip, one light brown, the other blackish; a redbrown patch on the middle of the abdomen, but the feathers edged with green; earpal edge and bastard-wing yellow tinged with red, in some specimens decidedly red; primary-coverts yellow, in some specimens tinged with red; under wing-coverts green, the greater ones blackish, like the quills underneath, but sometimes with one or several yellow feathers; quills green, the outer one black, the next three or four primaries blue, edged with green on the outer webs; tail nearly uniform brown-red both above and below, only above, towards the base, slightly tinged with green: bill hornwhite; feet dusky. Total length 10.3 to 9.5 inches, wing 5.6, tail 4.7, bill 7.5, tarsus 5.6.

Hab. Bogota.

S. America. Purchased. a. Ad. st. Purchased. Bogota. *b*−*e*. Ad. sk. Bogota. Sclater Coll. *f*–*g*. Ad. sk. h. Ad. sk. Bogota. Salvin-Godman Coll. i. Ad. sk. Colombia (Villagomez). Salvin-Godman Coll.

# 9. Pyrrhura melanura.

Aratinga melanurus, Spix, Av. Bras. i. p. 36, t. xxii. figs. 1, 2 (1824); Steph. Gen. Zool. xiv. p. 139 (1826); Brehm, Mon. d. Papag. t. 26. Sittace melanura, Wagl. Mon. Psitt. p. 645 (1832).

Psittacara variegata melanura, Bourj. Perr. pl. 26 (1837–38).

Psittacus melanurus, Hahn, Orn. Atl., Papag. p. 99, t. 78 (1840). Comurus melanurus, G. R. Gr. Gen. B. ii. p. 413, n. 16 (1845); Selat. P. Z. S. 1857, p. 266; G. R. Gr. List Psitt. Brit. Mus. p. 40 (1859); Finsch, Papag. i. p. 556 (1867); Pelz. Orn. Bras. pp. 260, 447, liii (1871); Gieb. Thes. Orn. i. p. 764 (1872);

Scl. & Salv. Nomencl. Av. Neotrop. p. 112, n. 42 (1873); Sclat. & Salv. P. Z. S. 1873, p. 299; Tacz. Orn. Pér. iii. p. 202, Tabl. p. 99 (1886); Allen, Bull. Am. Mus. Nat. Hist. ii. p. 263 (1889). Microsittace melanura, Bp. Rev. et Mag. de Zool. 1854, p. 150,

Pyrrhura melanura, Bp. Naumannia, 1856, Consp. Psitt. n. 38; G. R. Gr. Hand-list, ii. p. 148, n. 8127 (1870); Rehnw. Journ. f. Orn. 1881, p. 336 (Consp. Psitt. p. 177); id. Vogelbild. Nachtr. 90 (1883).

Conurus speculatus, Wied, MS., fide Allen, Bull. Am. Mus. Nat. Hist. ii. p. 263 (1889).

Adult male. Dark green; pileum brown, with the edges of the feathers green; frontal edge reddish brown; sides of the head, including cheeks and ear-coverts, green; sides of the neck, throat, and breast with two narrow cross bands at the tip of the feathers, one brown-grey and the other blackish; rest of the underparts with obsolete dusky edges to the feathers; outermost primaries blue, edged with green on the outer webs; first primary black. with no green or blue; primary-coverts red, tipped with yellow, the yellow colour increasing on the innermost coverts; greater under wing-coverts and quills underneath blackish; tail dark brown-chestnut, with very little green at the base of the outer web of the feathers, underneath darker, nearly black: bill pale horn-brown; feet blackish. Total length 9.3 inches, wing 4.8, tail 4.4, bill 0.65, tarsus 0.48.

Hab. Upper Amazons Valley from Rio Negro to the base of the Andes.

a. 3 ad. sk. b. Ad. st. c. Ad. sk.

Guia, Amazons (Wallace). Tocantins R., Amazons. Pebas, E. Peru (Hauxwell).

Salvin-Godman Coll. H. W. Bates, Esq. [C.]. Sclater Coll.

# 10. Pyrrhura souancei.

Conurus (sp. nov.), Sclat. P. Z. S. 1858, p. 76.

Microsittace souancei, Verr. Rev. et Mug. de Zool. 1858, p. 437,

pl. xii.; Sousa, Mus. Nac. Lisboa, Psittaci, p. 9 (1869).

Conurus souancei, Sclat. Cat. Am. B. p. 350, n. 2087 (1862); Sclat. & Salv. P. Z. S. 1866, p. 197, 1867, p. 753; Finsch, Papag. i. p. 558 (1862), ii. pp. 937, 944 (1868); Gieb. Thes. Orn. i. p. 767 (1872); Sclat. & Salv. P. Z. S. 1873, p. 300 (partim); Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 43 (1873); Tacz. & Berl. P. Z. S. 1885, p. 108; Tacz. Orn. Pér. iii. p. 200, Tabl. p. 99 (1886); Pelz. u. Lov. Ann. d. naturh. Hofmus. iii. p. 38 (1888).

Pyrrhura souancei, G. R. Gr. Hand-list, ii. p. 149, n. 8128 (1870); Rehnw. Journ. f. Orn. 1881, p. 288 (Consp. Psitt. p. 176); id.

Vogelbild. Nachtr. 88 (1883).

Adult. Green; pileum brown, feathers more or less edged with green; cheeks and ear-coverts green; throat and sides of the neck brown, upper breast green, each feather with two cross bands, a light brown one and a second blackish at the edge; in some specimens an obsolete brown-red patch in the middle of the abdomen, nearly hidden by the green edges; carpal edge, bastardwing, and primary-coverts scarlet; smaller under wing-coverts green, in some specimens partly red; greater ones blackish, like the quills underneath, but in some specimens partly red; quills green, the first primary black, the next five or six with the outer webs blue, edged with green; tail brown-red, with the base of the feathers above green: bill horn-brown; feet dusky. Total length about 9.5 inches, wing 5, tail 4.6, bill 0.65, tarsus 0.45.

Immature birds have the carpal edge, the bastard-wing, and the

primary-coverts green, with some feathers red.

Hab. Ecuador and Nauta district of Eastern Peru.

<ul><li>a. Ad. st.</li><li>b. Ad. st.</li><li>c. Ad. sk.</li></ul>	Rio Napo. Rio Napo. Rio Napo.	Massena Coll. Verreaux. Sclater Coll.
d, e. Ad. sk. f. ♀ ad. sk.	Sarayacu, Ecuador (Buckley). Nauta, Peruvian Amazous, Sep-	(Types of species.) Salvin-Godman Coll. Salvin-Godman Coll.
g. d ad. sk.	tember ( <i>Hauwwell</i> ). Nauta, Peruvian Amazons, February ( <i>E. Bartlett</i> ).	Salvin-Godman Coll.

### 11. Pyrrhura berlepschi. (Plate II. fig. 1.)

Conurus souancei (part.), Sclat. & Salv. P. Z. S. 1873, p. 300 (Chyavetas); Berl. (nec Verr.) Journ. f. Orn. 1889, p. 316.

Adult. Very much like P. souancei, but with the hoary edges of the feathers of the throat and breast much broader, approaching in that respect P. rupicola (Tsch.); the ear-coverts are of a brighter green with an olive tinge, and the blue colour of the primaries purer and brighter; besides, the green colour of the upper parts has a yellower tinge, the hidden brown-red patch on the abdomen is more distinct and apparently constant, and the bill perhaps darker. Total length 9.6 inches, wing 5.2 to 4.9, tail 4.7 to 4.3, bill 0.7, tarsus 0.45.

Hab. Peruvian Amazons.

Besides the type specimen, I have examined the one mentioned by Graf v. Berlepsch, and I find that the distinctive characters pointed out by him are exactly the same in both.

a. ♀ ad. sk. Chyavetas, E. Peru (E. Bartlett). (Type of species.)

# 12. Pyrrhura rupicola. (Plate II. fig. 2.)

Conurus rupicola, Tsch. Wiegm. Arch. 1844, i. p. 304; id. Faun. Per. p. 272, t. xxvi. f. 1 (1844); G. R. Gr. Gen. B. ii. p. 414, n. 39 (1845); Lafr. Rev. et Mag. de Zool. 1849, p. 243; Sclat. Cat. Am. B. p. 350, n. 2088 (1862); Finsch, Papag. i. p. 560 (1867); Gieb. Thes. Orn. i. p. 767 (1872); Sclat. & Salv. Nomencl. Ar. Neotrop. p. 112, n. 44 (1873): Tacz. Orn. Pér. iii. p. 201,

Tabl. p. 90 (1886); Allen, Bull. Am. Mus. Nat. Hist. ii. p. 104

(1889).

Microsittace rupicola, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 54. Pyrrhura rupicola, Bp. Naumannia, 1856, Consp. Psitt. n. 44; G. R. Gr. Hand-list, ii. p. 149, n. 8139 (1870); Rehnw. Journ. f. Orn. 1881, p. 289 (Consp. Psitt. p. 177); id. Vogelbild. Nachtr. 89 (1883).

Conurus rupicolus, G. R. Gr. List Psitt. Brit. Mus. p. 42 (1859).

Adult. Green; pileum brown, over the eyes a green superciliary band; cheeks and ear-coverts green; feathers of the hind neck with light brown edges; throat and upper breast brown, with broad bands at the tip of the feathers, dirty grey on the throat, yellowish on the upper breast; on the middle of the abdomen at the bases of the feathers a brown-red tinge; carpal edge green, with many red feathers, perhaps, in the fully adult bird, entirely red; bastard-wing and primary-coverts red; smaller under wingcoverts green; the greater ones, like the quills underneath, blackish, with a slight olive tinge; first primary black, the remainder green on the outer webs, with no blue tinge; tail above green, with a slight brown tinge on the inner webs of the lateral tail-feathers; tail below blackish brown: bill horn-brown; feet dusky. length 10.5 inches, wing 5.2, tail 4.6, bill 0.7, tarsus 0.5.

Hab. Peru.

a. Ad. sk.

Peru (Tschudi).

Sclater Coll. (A type of the species.)

# 13. Pyrrhura molinæ.

Conurus molinæ, Mass. et Souancé, Rev. et Mag. de Zool. 1854, p. 73; Bp. Rev. et Mag. de Zool. 1854, p. 147; G. R. Gr. List Psitt. Brit. Mus. p. 40 (1859); Finsch, Papag. i. p. 547 (1867); Rull. Bril. Mus. p. 40 (1859); Frisch, Papag. 1. p. 547 (1867); Pelz. Orn. Bras. pp. 259, 446, 1iii (1871); Gieb. Thes. Orn. i. p. 765 (1872); Selat. § Salv. Nomencl. Av. Neotrop. p. 112, n. 37 (1873); Selat. § Salv. P. Z. S. 1879, p. 635; White, P. Z. S. 1882, p. 621; Selat. ibid.; id. Argent. Orn. ii. p. 43, pl. xiv. (1886); Berl. Journ. f. Orn. 1887, p. 133; Pelz. u. Lor. Ann. d. naturh. Hofmus. iii. p. 39 (1888); Allen, Bull. Am. Mus. Nat. Hist. ii. p. 104 (1889).

Microsittace pyrrhura, Bp. (nec Rchnb.) Rev. et Mag. de Zool. 1854, pp. 147, 150, n. 61; Sousa, Mus. Nac. Lisb. Psittaci, p. 9 (syn.

emend.) (1869).

Microsittace molinæ, Souancé, Rev. et Mag. de Zool. 1856, p. 63. Pyrrhura moline, Bp. Naumannia, 1856, Consp. Psitt. n. 36 (syn. emend.); Souancé, Icon. Perr. pl. xv. (1857); G. R. Gr. Handlist, ii. p. 148, n. 8126 (1870); Rehme. Jown. f. Orn. 1881, p. 339 (Consp. Psitt. p. 179); id. Vogelbild. Nachtr. 91 (1883). Conurus phænicurus, Natterer, MS. (nec Licht.); Schleg. Mus. P.-B. Psittaci, p. 26 (1864); id. op. cit. Revue, p. 7 (1874).

Sittace phænicura, Natt. Cat. M.S., fide Pelz. l. c. (1871).

Adult. Green; pileum brown, with the feathers more or less edged with blue; nape brown tinged with blue; cheeks green, VOL. XX.

ear-coverts greyish brown; throat, sides of the neek, and upper breast light brown, sometimes with a greenish tinge, each feather with two cross bands—one broader, pale greyish buff, and a second one very narrow, blackish brown at the edge; a brown-red patch on the middle of the abdomen; under tail-coverts green, in some specimens tinged with bluish; bastard-wing, primary-coverts, and primaries blue, the outer secondaries tinged with blue along the middle, green on the outer webs; greater under wing-coverts and quills underneath blackish, slightly tinged with olive; tail brown-red, the base of the four central feathers green, all tipped with bluish in some specimens; tail underneath coppery red: bill horn-brown; feet dusky. Total length 10.5 inches, wing 5.2, tail 5.3, bill 0.78 to 0.70, tarsus 0.45.

Female. Like the male.

Hab. Matto Grosso, Bolivia, and Northern Argentina.

Plate xiv. in the 'Argentine Ornithology' is quite wrong as regards the red colour of the bill.

a. Ad. sk.	Matto Grosso, Brazil, July (Natterer).	Sclater Coll.
b. $Q$ ad. $sk$ .	Bolivia.	Massena Coll. (Type of species.)
c. Ad. st.	Bolivia,	Massena Coll.
d. Ad. st.	Bolivia.	T. Bridges, Esq. [C.].
e. Ad. sk.	Bolivia (Bridges).	Sclater Coll.
f. Ad. sk.	Bolivia.	Salvin-Godman Coll.
g. Ad. sk.	Piedra Blanca, Bolivia, April (H. H. Smith).	Salvin-Godman Coll.
h, i. Ad. sk.	Tilotilo, Prov. Yungas, Bolivia (C. Buckley).	Salvin-Godman Coll.
k. Ad. sk.	Salta, Argentine Republic (White).	Selater Coll.

# 14. Pyrrhura devillei.

Conurus devillei, Mass. et Souancé, Rev. et Mag. de Zool. 1854, p. 73;
G. R. Gr. List Psitt. Brit. Mus. p. 40 (1859); Finsch, Papag. i.
p. 532 (1867); Pelz. Orn. Bras. p. 259 (note) (1871); Gicb. Thes. Orn. i. p. 762 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 30 (1873).

Microsittace devillii, Bp. Rev. et Mag. de Zool. 1854, pp. 147, 150,

n. 52; Souancé, Rev. et Mag. de Zool. 1856, p. 63.

Pyrrhura devillii, Bp. Naunannia, 1856, Consp. Psitt. n. 35; Souancé,
Icon. Perr. pl. xvi. (1857); G. R. Gr. Hand-list, ii. p. 149, n. 8137
(1870); Rehnw. Journ. f. Orn. 1881, p. 286 (Consp. Psitt. p. 174);
id. Vogelbild. Nachtr., in the text of n. 85 (1883).

Adult (type). Green; a narrow frontal band reddish brown; pileum brown, with the feathers edged with green; cheeks green; car-coverts greyish brown; breast olive-brown, each feather edged with two narrow cross bands, one light and the other dusky or blackish; on the middle of the abdomen a brown-red patch; bend of the wing, carpal edge, and smaller under wing-covert crimson; bastard-wing, primary-coverts, and primaries blue, edged with black

at the tip; greater under wing-coverts and quills underneath blackish grey, with a slight olive tinge on the inner webs; tail above olive, below coppery brown-red, each feather tipped with olive: bill and feet dusky. Total length 9.4 inches, wing 5, tail 4.1, bill 6.5, tarsus 0.42.

Hab. Bolivia.

a. Ad. sk.

Bolivia.

Massena Coll. (Type of species \*.)

#### 15. Pyrrhura perlata.

Psittacus lepidus, Ill. in Mus. Berol., fide Kuhl, Consp. Psitt. p. 22 (in syn. P. versicoloris) (1820); Hahn, Orn. Atl., Papag. p. 100 (nec tab. 79) (1840).

Psittacus versicolor, jun., Kuhl, Consp. Psitt. p. 22 (1820).

? Wave-headed Parrakeet, Lath. Gen. Hist. ii. p. 169 (1822). Aratinga perlatus, *Spix*, *Av. Bras.* i. p. 35, t. xx. figs. 1, 2 (bad) (1824); Steph. Gen. Zool. xiv. p. 138 (1826); Brehm, Mon. d. Papag. t. 24. figs. 1, 2 (1852).

Sittace lepida, Wagl. Mon. Psitt. p. 642 (1832).

Sittace chlorogenys, Wayl. Mon. Psitt. p. 643 (1832); Burm. Syst. Ueb. ii. p. 176 (note) (1856).

Psittacara perlata, Bourj. Perr. pl. 27 (1837–38).

Aratinga pseudoperlatus, Brehm, Mon. d. Papag. Heft v. (text) (1842).

Conurus chlorogenys, G. R. Gr. Gen. B. ii. p. 413, n. 21 (1845); id.

List Psitt. Brit. Mus. p. 43 (1859).

Conurus lepidus, G. R. Gr. Gen. B. ii. p. 413, n. 20 (1845); Licht. Nomencl. Av. p. 73 (1854); Burm. Syst. Ueb. ii. p. 175 (1856); G. R. Gr. List Psitt. Brit. Mus. p. 42 (1859); Finsch, Papage. i. p. 543 (1867), ii. p. 945 (1868); Gieb. Thes. Orn. i. p. 763 (1872).

Microsittace chlorogenys, Bp. Rev. et Mag. de Zool. 1854, p. 150,

Microsittace lepida, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 57; Souancé, Rev. et Mag. de Zool. 1856, p. 62; Sousa, Mus. Nac. *Lisboa*, Psittaci, p. 9 (1869).

Pyrrhura chlorogenys, Bp. Naumannia, 1856, Consp. Psitt. n. 46;

G. R. Gr. Hand-list, ii. p. 149, n. 8135 (1870).

Pyrrhura lepida, Bp. Naumannia, 1856, Consp. Psitt. n. 47; Rchuw. Journ. f. Orn. 1881, p. 339 (Consp. Psitt. p. 179); id. Vogelbild. Nachtr. 93 (1883).

Pyrrhura perlata, G. R. Gr. Hand-list, ii. p. 149, n. 8134 (1870).

Conurus perlatus, Sclat. & Salv. P. Z. S. 1867, pp. 588, 595; Pelz. Orn. Bras. pp. 259, 446, lii (1871); Sclat. & Salv. Nomencl. Ar. Neotrop. p. 112, n. 36 (1873); Sclat. P. Z. S. 1884, p. 614.

Adult. Green; a dull frontal band, another on the lower part of the hind neck, cheeks, upper breast, sides, vent, outermost upper tail-coverts, and under tail-coverts bluish; pileum and nape brown; cheeks more or less greenish on the upper part; ear-coverts browngrey; throat and breast brown, each feather with lighter edges; feathers of the breast with two cross bands-a broader one light

<sup>\*</sup> Souancé, in his 'Iconographie,' says that this species is represented also in the Museum of Paris.

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brown, and a second one narrow and blackish at the tip; a brown-red patch in the middle of the abdomen, sometimes scarcely visible, and always more or less hidden by the green edges of the feathers; bastard-wing and primary-coverts blue; first primary black, the remainder deep blue, with a narrow brighter edge on the outer webs; secondaries blue, with the outer webs green; tertials green; bend of the wing and smaller under wing-coverts red, the greater ones blackish, sometimes some of them reddish; quills underneath blackish with a slight olive tinge; tail above brown-red, with an olive tinge at the base, below dark reddish brown, but redder at the base of the inner web of the feathers: bill horn-brown; feet dusky. Total length 9.5 inches, wing 5, tail 4.6, bill 0.65, tarsus 0.42.

Young. The bend of the wing green with no red feathers. Hab. Lower Amazons.

a. Ad. st.	Brazil.	Purchased.
b. Ad. sk.	Para.	Massena Coll.
c. Ad. sk.	Capim R., Para (Wallace).	Sclater Coll.
d. Ad. sk.		Gould Coll.

### 16. Pyrrhura rhodogaster.

Conurus rhodogaster, Natt. MS.; Sclat. P. Z. S. 1864, p. 298, pl. xxiv.; Schleg. Mus. P.-B. Psittaci, p. 27 (1864); Finsch, Papag. i. p. 549 (1867); Pelz. Orn. Bras. pp. 260, 446, liii (1871); Gieb. Thes. Orn. i. p. 766 (1872); Sclat. & Salv. Nomenel. Av. Neotrop. p. 112, n. 38 (1873); Schleg. Mus. P.-B. Psittaci, Revue, p. 7 (1874); Pelz. u. Lor. Ann. d. naturh. Hofmus. iii. p. 39 (1888). Pyrrhura rhodogaster, G. R. Gr. Hand-list, ii. p. 149, n. 8140 (1870). Sittace rhodogaster, Natt. Cat. MS., fide Pelz. l. c.

Pyrrhura rhodogastra, Rehnw. Journ. f. Orn. 1881, p. 310 (Consp. Psitt. p. 180); id. Vogelbild. Nachtr. 94 (1883).

Adult. Pileum, nape, sides of the neck, throat, and upper breast brown, each feather with lighter edges; forehead and lower part of the cheeks bluish; upper part of the cheeks olive-green; a collar on the lower part of the nape blue; interscapular region, lower back, middle of the rump, and central upper tail-coverts green; shorter scapulars green, the longer ones greenish blue; lateral upper tailcoverts dull blue; lower breast and abdomen erimson; flanks, vent, and under tail-coverts dull blue; smaller upper wing-coverts green like the back, greater ones dull blue, more or less edged with greenish: bastard-wing, primary-coverts, and quills blue, deeper on the primaries, which are black at the tip; first primary entirely black; secondaries tinged with green on the outer webs; smaller under wing-coverts crimson, the greater ones and the quills underneath black; tail above dark red-brown, tinged with green at the base of the central feathers, and with blue at the base of the outer ones: tail underneath black: bill and feet blackish. Total length 9 inches, wing 5·1, tail 4·1, bill 0·7, tarsus 0·4.

Female. Like the male.

Hab. Interior of Brazil near Borba.

a. Ad. sk. Borba (Natterer). Sclater Coll. (Type of species.)

### 17. Pyrrhura hæmatotis.

Pyrrhura hæmatotis, Souancé, Rev. et Mag. de Zool. 1857, p. 97; id. Icon. Perr. pl. xviii. (1857); Bp. Compt. Rend. xliv. p. 538 (1857);
G. R. Gr. Hand-list, ii. p. 149, n. 8136 (1870); Rehnw. Journ. f. Orn. 1881, p. 339 (Consp. Psitt. p. 179); id. Vogelbild. Nachtr. 92 (1883).

Conurus hæmatotis, G. R. Gr. List Psitt. Brit. Mus. p. 43 (1859);
Finsch, Papag. i. p. 551 (1867); Gieb. Thes. Orn. i. p. 763 (1872);
Sclat. & Salv. Nomencl. Av. Neotrop. p. 112, n. 39 (1873).

Adult. Green; forehead and crown as far as the eyes brown, the feathers edged with bluish; occiput olive-green; cheeks green; ear-coverts brown-red; the feathers on the sides of the neck have brown-greyish edges: throat and upper breast green with a slight olive tinge, each feather with narrow dusky edges, scarcely perceptible; a brown-red patch on the middle of the abdomen, nearly hidden by the green edges of the feathers; under tail-coverts bluish or bluish green; carpal edge bluish; bastard-wing, primary-coverts, and primaries blue, these edged at the tip with black; first primary black; smaller under wing-coverts green, the greater ones and the quills below blackish, with a slight olive tinge; tail brown-red, scarcely tinged with green at the base, the tips of the feathers olive-green; tail below coppery red: bill horn-brown, with the tip whitish; feet dusky. Total length about 9 to 10 inches, wing 5·1 to 4·9, tail 4·7 to 4·2, bill 0·7 to 0·6.

Hab. Venezuela.

a. Ad. sk. Venezuela.

Massena Coll. (Type of species.) Sclater Coll.

b. Ad. sk.

Venezuela (Spence).

# 18. Pyrrhura rhodocephala. (Plate III.)

Conurus rhodocephalus, Sclat. § Salv. P. Z. S. 1870, p. 787; Gieb.
 Thes. Orn. i. p. 766 (1872); Sclat. § Salv. Nomencl. Av. Neotrop.
 p. 112, n. 32 (1873); Sclat. Ibis, 1881, p. 131.

Pyrrhura rhodocephala, Rehnw. Journ. f. Orn. 1881, p. 340 (Consp. Psitt. p. 180); id. Vogelbild. Nachtr. 96 (1883).

Adult male. Green; pileum rosy red; ear-coverts dull red; cheeks green; a slight tinge of red on the throat; a brown-red patch in the middle of the abdomen; a few orange-red feathers on the bend of the wing and along the earpal edge; bastard-wing and primary-coverts white; first primary black, the remainder blue on the outer webs and with narrow green edges; secondaries green; smaller under wing-coverts green, greater ones blackish, washed with olive, but often some of them white; quills underneath blackish, with a slight olive tinge on the inner webs; tail coppery red, sometimes with a slight tinge of green at the base; bill horn-whitish; feet dusky; iris brown-red, or red. Total length 9.5 inches, wing 5.4, tail 4.5, bill 0.7, tarsus 0.45.

Young. Differs from the adult in having a bluish tinge on the pileum, where are scattered a few rose-red feathers; a few orange feathers on the bend of the wing; the bastard-wing and the primary-coverts blue; the base of the tail above with a green tinge.

Hab. Venezuela.

The type of the species is a bird without any white on the bastard-wing and primary-coverts.

a. of imm. sk. Merida, Venezuela, July Sclater Coll. (Types (Goering). of species.) Merida, Venezuela (Goering). Merida, Venezuela, February. *b-e*. ♂ ad. sk. Salvin-Godman Coll. f-h. Ad. et juv. Sclater Coll. sk. i. & ad. sk. Sierra Nevada, Venezuela Salvin-Godman Coll. (Goering).

#### 19. Pyrrhura hoffmanni.

Conurus hoffmanni, Cab. Sitzb. d. Ges. naturf. Freunde zu Berlin, am 13 Nov. 1861; Finsch, Papag. i. p. 553 (1867); Lawr. Ann. Lyc. N. Y. ix. p. 131 (1868); Sclat. & Salv. Exot. Orn. pl. 81 (1869); Frantz. Journ. f. Orn. 1869, p. 365; Salv. P. Z. S. 1870, p. 214; id. Ibis, 1871, p. 93; Gieb. Thes. Orn. i. p. 763 (1872); Sclat. & Salv. Nomencl. Ar. Neotrop. p. 111, n. 40 (1873); Schleg. Mus. P.-B. Psittaci, Revue, p. 6 (1874); Bowcard, P. Z. S. 1878, p. 46; Zeled. Pr. U. S. Nat. Mus. viii. p. 111 (1885).

Pyrrhura hoffmannii, Cab. Journ. f. Orn. 1862, p. 335; G. R. Gr. Hand-list, p. 149, n. 8141 (1870); Rehnw. Journ. f. Orn. 1881, p. 288 (Consp. Psitt. p. 176); id. Vogelbild. Nachtr. 86 (1883).

Adult male. Green; the feathers of the head and throat yellowish towards the tips and with the shafts more or less red or yellow; a red patch on the car-coverts; an obsolete reddish spot on the chin; the feathers of the lower throat and breast with obsolete dusky edges; outermost primaries blue towards the base of the outer webs; bastard-wing, primary-coverts, and inner primaries and outermost secondaries bright yellow at the bases; greater under wing-coverts and quills underneath dusky grey, tinged with olive on the inner webs; a yellow patch at the base of the quills; tail-feathers above reddish olive, edged with green on the outer webs, underneath brown-red, with the tips olive: bill horn-white; feet grey; naked skin round the eyes dusky flesh-colour. Total length 9·3 inches, wing 5·5, tail 4·5, bill 0·7, tarsus 0·5.

Female. Like the male.

Hab. Costa Riea and Veragua.

Veragua specimens differ from those from Costa Rica in having constantly the shafts and the tips of the feathers of the nape tinged with red.

a. d ad. sk.
 b. d ad. sk.
 Angostura, Costa Rica, January (J. Carmiol).
 Dota, Costa Rica, January (J. Carmiol).
 Salvin-Godman Coll. (J. Carmiol).

c. Ad. sk. d, e. Ad. sk.  $f, g. \ \mathcal{J} \ \mathcal{Q} \ \text{ad. sk.}$ 

Costa Rica. Veragua (Arcé). Chiriqui (Arcé). Southern slope of the Volcano of Chiriqui (Arcé).

Van Patten, Esq. [C.]. Salvin-Godman Coll. Sclater Coll. Salvin-Godman Coll.

### 13. MYOPSITTACUS.

Type. M. monachus.

Myiopsitta, Bp. Rev. et Mag. de Zool. 1854, p. 150 ... Range. Bolivia, Argentine Republic, and Uruguay.

## Key to the Species.

a. Grey feathers of the throat and breast with lighter edges or bands; tail-feathers with the tip and inner web yellow .....

monachus, p. 231.

b. Grey feathers of the throat and breast uniform, with no lighter edges; tail-feathers with no yellow at the tip and on the inner web ......

luchsi, p. 233.

## 1. Myopsittacus monachus.

Perruche à poitrine grise, D'Aubent. Pl. Enl. 768.

Perruche souris, Buff. Hist. Nat. Ois. vi. p. 148 (1779); Levaill. Perr. pl. 38 (1801) (ex D'Aubenton). Grey-breasted Parrakeet, Lath. Syn. i. p. 247 (1781); id. Gen. Hist.

ii. p. 172 (1822).

? Psittacus choræus, Mol. Saggio Stor. nat. Chili, pp. 257, 343 (1782); Gm. S. N. i. p. 337, n. 108 (1788); Lath. Ind. Orn. i. p. 112,
n. 93 (1790); Bechst. Kurze Ueb. p. 91 (1811–12); Vieill. N. D. xxv. p. 329 (1817); Kuhl, Consp. Psitt. p. 95 (1820); Vieill. Enc. Méth. iii. p. 1375 (1823).

Psittacus monachus, Bodd. Tabl. Pl. Enl. p. 48 (1783).

Psittacus murinus, Gm. S. N. i. p. 327, n. 80 (1788); Lath. Ind. Psittacus murmus, Gm. S. N. 1. p. 321, n. 80 (1788); Lath. Ind.
Orn. i. p. 101, n. 55 (1790); Shaw, Gen. Zool. viii. p. 456 (1811);
Bechst. Lath. Ueb. p. 78 (1811-12); Vicill. N. D. xxv. p. 355
(1817); Kuhl, Consp. Psitt. p. 28 (1820); Psw. Zool. Ill. ii. pl. 89
(bad) (1821-22); Vicill. Enc. Méth. iii. p. 1401 (1823); Isis,
1829, p. 999; Voigt, Cuv. Uebers. p. 733 (1831); Wagl. Mon. Psitt.
p. 741 (1832); Hahn, Orn. Atl., Papag. p. 62 (syn. emend.),
t. 47 (1836); Thienem. Fortpflanz. d. ges. Vög. p. 76 (1846).
PChili Parrot, Lath. Syn. Suppl. ii. p. 93 (1802); id. Gen. Hist. ii.

p. 220 (1822).

Viudita, Azara, Apunt. Hist. nat. Parag. i. p. 431, n. 282 (1803). La jeune Veuve, Azara, Voy. (ed. Sonn.), iii. p. 68 (1809); Thienem. Fortpflanz. d. ges. Vög. p. 72 (note) (1846).
Psittacus cotorra, Vieill. N. D. xxv. p. 362 (1817); id. Enc. Méth.

iii. p. 1396 (1823).

Conurus murinus, Less. Tr. d'Orn. p. 212 (1831); id. Zool. Beagl. iii. p. 112 (1841); Burm. Syst. Ueb. ii. p. 171 (1856); id. Journ. f. Orn. 1858, p. 157, 1860, p. 243; id. Reise La-Plata St. ii. pp. 107. 441 (1861).

Sittace murina (part.), Wagl. Mon. Psitt. p. 638 (1832); Hartl. Syst. Verz. Ges. Mus. p. 86 (1844).

? Sittace canicollis, Wagl. Mon. Psitt. p. 540 (ex Swainson) (1832); Souancé, Icon. Perr. in the text of pl. xxiii. (1857).

? Psittaca calita, Jard. & Selb. Ill. of Orn. pl. 82 (1837-40); Souancé,

Icon. Perr. in the text of pl. xxiii. (1857).

Conurus monachus, G. R. Gr. Gen. B. ii. p. 414, n. 25 (syn. emend.) (1845); Hartl. Ind. Azar. Apunt. p. 18 (1847); ? Gay, Hist. Chili, Zool. i. p. 368 (1847); G. R. Gr. List Psitt. Brit. Mus. p. 43 (1859); Sclat. Cat. Am. B. p. 350, n. 2091 (1862); Schleg. Mus. P.-B. Psittaci, p. 15 (1864); id. op. cit. Revue, p. 4 (1874); Garrod, P. Z. S. 1874, p. 587.

Conurus calito, G. R. Gr. Gen. B. ii. p. 414, n. 40 (1845).

? Conurus canicollis, G. R. Gr. Gen. B. ii. p. 414, n. 43 (1845); id.

List Psitt. Brit. Mus. p. 44 (1859).

Myiopsitta murina, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 62; Souancé, Rev. et Mug. de Zool. 1856, p. 63; Bp. Naumannia, 1856, Consp. Psitt. n. 48.

Myiopsitta calito, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 65. Conurus griseicollis, Des Murs in Casteln. Exp. Am. du Sud, Ois. p. 16 (1855) (Rio Paraguay); Hartl. Journ. f. Orn. 1857, p. 42.

Myiopsitta calita, Souance, Rev. et Mag. de Zool. 1856, p. 63; Bp. Naumannia, 1856, Consp. Psitt. n. 49; G. R. Gr. Hand-list, ii. p. 149, n. 8146 (1870).

Conurus calita, G. R. Gr. List Psitt. Brit. Mus. p. 43 (1859); Sclat. Cat. Am. B. p. 350, n. 2091 (1862); Schleg. Mus. P.-B. Psittaci, p. 16 (1864); id. op. cit. Revne, p. 4 (1874).

Bolborhynchus monachus, Finsch, Papag. ii. p. 114 (1867); Pelz. Orn. Bras. pp. 261 (note), 447 (1871); Gieb. Thes. Orn. i. p. 469 (1872); Schmidt, Zool. Gart. 1872, p. 257; Lee, Ibis, 1873, p. 134; Sclat. & Finsch, Ibis, 1873, p. 480; Sclat. & Salv. Nomencl. Av. Neotrop. p. 111, n. 1 (1873); Garrod, P. Z. S. 1874, p. 587; Durnf. Ibis, 1877, p. 186; Burm. P. Z. S. 1878, p. 77; Sclat. & Salv. P. Z. S. 1879, p. 635; Gibson, Ibis, 1880, p. 3; Schmidt, P. Z. S. 1880, p. 310; Rehnw. Vogelbild. t. xvii. f. 7 (1878–83); id. Journ. f. Orn. 1881, p. 346 (Consp. Psitt. p. 186); White, P. Z. S. 1882, p. 621; Selat. List Vert. An. 8th ed. p. 345 (1883); Barrows, Auk, 1884, p. 28; Berl. Journ. f. Orn. 1887, p. 121; Sclat. Argent. Orn. ii. p. 43 (1889).

Myiopsitta monachus, G. R. Gr. Hand-list, ii. p. 149, n. 8145 (1870).

Myiopsitta canicollis, G. R. Gr. Hand-list, ii. p. 150, n. 8150 (1870). Bolborhynchus murinus, Burm. P. Z. S. 1878, p. 77.

Adult. Green; sinciput, lores, cheeks, throat, and breast grev, the feathers of the throat and upper breast with lighter edges; occiput, rump, and upper breast bright green; abdomen, flanks, and under tail-coverts yellow-green; primary-coverts and quills blue, edged with green on the outer webs; smaller under wing-coverts dull green, the greater ones and inner webs of the quills bluish; tail green above, bluish below, the lateral feathers with the inner webs and tips greenish yellow: bill reddish white; feet grey; iris brown. Total length 11.5 inches, wing 5.6, tail 5.5, bill 0.7, tarsus 0.5.

Hab. Bolivia, Paraguay, Argentine Republic, and Uruguay. Whether the bird from Mendoza (Psittaca calita, Jard. & Selb.) is distinct from the ordinary B. monachus I am not able to say, having no specimens from that locality.

a. Ad. sk.	Bolivia (Bridges).	Sclater Coll.
b. Ad. sk.	Bolivia.	Purchased.
$c. \ \ 2 \ ad. \ sk.$	Bolivia.	Sclater Coll.
d. of ad. sk.	Cosquin, Cordova, Arg. Rep.,	Salvin-Godman Coll.
	July (White).	
$e, f. \ \mathcal{J} \ \mathcal{Q} \ \mathrm{ad. sk.}$	Cosquin, Cordova, Arg. Rep.,	E. W. White [C.].
	June, July.	
g. Ad. sk.	Cordova, Arg. Rep., December	Salvin-Godman Coll.
	(White).	
h. Ad. sk.	Gualequaichu, Arg. Rep. (Lee).	Salvin-Godman Coll.
i. Ad. st.	Maldonado, Uruguay (Darwin).	II.M.S. 'Beagle.'
k. Ad. sk.	[Brazil.]	Massena Coll.

## 2. Myopsittacus luchsi. (Plate IV.)

P Buenos-Ayres Parrot, Lath. Gen. Hist. ii. p. 184 (1822).

? Conurus monachus, Boeck (nec Bodd.), Naumannia, 1855, p. 507.

Myiopsitta murinoides, Souancé (nec Temm.), Rev. et Mag. de Zool. 1856, p. 63.

Conurus murinoides, G. R. Gr. List Psitt. Brit. Mus. p. 43 (1859). Contras mutmondes, G. R. Gr. List 1 sat. Brat. Mas. p. 43 (1895);
Bolborhynchus luchsi, Finsch, Papag. ii. p. 121 (1868); Gieb. Thes.
Orn. i. p. 469 (1872); Sclat. & Salv. Nomencl. Av. Neotrop.
p. 112, n. 2 (1873); Sclat. & Salv. P. Z. S. 1879, p. 635; Rehnw.
Journ. f. Orn. 1881, p. 346 (Consp. Psitt. p. 186); id. Vogelbild.
Nachtr. 101 (1883).
Myiopsitta luchsi, G. R. Gr. Hand-list, ii. p. 150, n. 8152 (1870).

Very much like B. monachus, but the forehead, throat, and breast uniform grey, without the lighter edges at the tips of the feathers; the abdomen and flanks more yellowish-olive; tail-feathers bluish green, with no yellow tips, and the lateral ones with no yellow colour on the inner webs; tail underneath verditer-blue. Size of B. monachus.

Hub. Bolivia?

u, b. Ad. st.

Bolivia.

T. Bridges [C.]. (Types of species.)

non and

### 14. BOLBORHYNCHUS.

Bolborhynchus, Bp. Compt. Rend. xliv. p. 596, gen. 30 (1857); Souance, Icon. Perr. pl. xxiii. (1857)...... B. aymara. Bolborrhynehus, Finsch, Papag. ii. p. 111 (1868). par , otherse no reputtace that

Range. From Mexico to Northern Chili and Argentine Republic.

Pailapsiager Redgen, 1912 trammepaillace air loon die al a = 13 4 syrahus! America Paca Pa

## Key to the Species.

a. Upper parts green, with no black bands.
a'. Tail rather long, not much shorter than the
wings.
a". Cap brown, throat and breast grey aymara, p. 234.
b". No brown cap; pileum green, like the re-
mainder of the upper parts.
a"'. No distinct yellow band on the forehead
and round the base of the bill.
a <sup>4</sup> . Middle of the underparts bluish grey
or glaucous rubrirostris, p. 235.
b4. Underparts yellowish green, with no
glaucous tinge along the middle orbignyi, p. 236. $b'''$ . A yellow band round the base of the bill,
from the forehead to the throat aurifrons, p. 236.
b'. Tail short, much shorter than the wings.
c". Larger, wing 4·3 inches; no yellow under
the eyes; inner webs of the quills below
green andicola, p. 238.
d". Smaller, wing 3.7 inches; a yellow streak
from below the eyes to the upper ear-
coverts; inner web of the quills below
bluish green; bill rather long panychlorus, p. 238.
b. Upper parts green, with black bands, conspicuous
also on the sides lineolatus, p. 239.

# 1. Bolborhynchus aymara.

Arara aymara, D'Orb, Voy, de l'Amér, Mér, ii, p. 376 (1839). Psittacus murinoides, Temm. in Mus. Lugd. Batav. (fide Schleg. Mus. P.-B. Psittaci, p. 16, 1864).

Myiopsitta canicollis, Ep. (nec Wagl.) Rev. et Mag. de Zool. 1854, p. 150, n. 63; Souancé, Rev. et Mag. de Zool. 1856, p. 63; Bp. Naumannia, 1856, Consp. Psitt. n. 51 (=aymara, fide Souancé).

Myiopsitta murinoides, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 64 (descr. nulla); Ep. Naumannia, 1856, Consp. Psitt. n. 50; G. R. Gr. Hand-list, ii. p. 150, n. 8153 (1870).

Bolborhynchus aymara, Souancé, Icon. Perr. pl. xxiii. (1857); Finsch, Papag. ii. p. 123 (1867); Gieb. Thes. Orn. i. p. 469 (1872); Sund. Meth. nat. Av. disp. Tent. p. 71 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 3 (1873); Sclat. & Salv. P. Z. S. 1879, p. 635; Salv. Cat. B. Strickl. Coll. p. 466 (1883); White, P. Z. S. 1883, p. 40; Allen, Bull. Am. Mus. Nat. Hist. ii. p. 104 (1889); Sclat. Argent. Orn. ii. p. 46, pl. xv. (1889).

Conurus agilis?, Burm. (nec Licht.) Journ. f. Orn. 1858, p. 137. Conurus aymara, G. R. Gr. List Psitt. Brit. Mus. p. 44 (syn. emend.) (1859); Burm. Reise, ii. p. 442 (1861); Sclat. Cut. Am. B. p. 350, n. 2092 (1862); Schley. Mus. P.-B. Psittaci, p. 16 (1864); Leyb. Exc. Pamp. Argent. p. 46 (1873); Schley. op. cit. Revue, p. 4 (1874); Mart. Journ. f. Orn. 1873, pp. 442, 445. Commus brunniceps, Burm. Journ. f. Orn. 1860, p. 243; Sclat. Ibis,

1861, p. 200 (note).

Conurus aguava, Schleg. Dierent. p. 81 (Chili) (1864).

Myiopsitta aymara, G. R. Gr. Hand-list, ii. p. 150, n. 8147 (1870). Bolborhynchus brunneiceps, Rchnw. Jown. f. Orn. 1881, p. 346 (Consp. Psitt. p. 186); id. Vogelbild. Nachtr. 102 (1883).

Adult. Green; pileum and upper ear-coverts earthy brown; cheeks, sides of the neck, and throat pale grey; breast, abdomen, and under tail-coverts yellowish green; on the middle of the breast a slight grey tinge; bastard-wing, primary-coverts, and quills bluish green; smaller under wing-coverts yellowish green, the greater ones and inner webs of the quills underneath dusky, with a slight olive tinge; tail green, two central tail-feathers bluish towards the tips, tail below bluish green: bill whitish; feet flesh-colour (?). Total length 8 inches, wing 3.7, tail 4.1, bill 0.45.

Female. Like the male.

Hab. Bolivia, Western Argentine Republic, and Chilian Andes.

Sclater Coll. a. Ad. sk. Bolivia. Sorata, Bolivia (Buckley). b. Ad. sk. Sclater Coll. c, d. Ad. sk. Sorata, Bolivia (Buckley). Salvin-Godman Coll. Jan. Salvin-Godman Coll. (One e. Ad. sk. Mendoza, (Burmeister).of the types of C. brunneiceps, Burm.) Chilian Andes (Leybold). f. d ad. sk. Salvin-Godman Coll. g, h. Ad. sk. Chili. Cuming [C.]. i. Ad. sk. Chili. Purchased.

## 2. Bolborhynchus rubrirostris.

Conurus rubrirostris, Burm. Journ. f. Orn. 1860, p. 243; id. La-Plata

Reise, ii. p. 442 (1861).

Bolborhynchus rubrirostris, Finsch, Papag. ii. p. 125 (1867); Gieb. Thes. Orn. i. p. 470 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 4 (1873); Burm. P. Z. S. 1878, p. 77; Rehnw. Journ. f. Orn. 1881, p. 347 (Consp. Psitt. p. 187); id. Vogelbild. Nachtr. 103 (1883); Sclat. Argent. Orn. ii. p. 46 (1889).

Myiopsitta rubrirostris, G. R. Gr. Hand-list, ii. p. 150, n. 8151

(1870).

Conurus rufirostris, "Burm.," Leyb. Evc. Pamp. Argent. p. 46 (1873); Mart. Journ. f. Orn. 1875, pp. 442, 445.

Adult. Green; a slight yellowish tinge on the frontal edge; throat, middle of the breast and of the abdomen, and under tail-coverts with a slight bluish tinge; sides of the breast and flanks yellowish green; bastard-wing, primary-coverts, and outer webs of the quills dull blue; outermost secondaries bluish, the innermost gradually greener; smaller under wing-coverts bluish green, the greater ones and inner webs of the quills below dusky grey; tail bluish green: bill rather thick, rosy red; feet flesh-colour. Total length 7.5 inches, wing 3.9, tail 3, bill 0.52, tarsus 0.52.

Hab. Western Argentine Republic, near Mendoza, and Chilian

Andes.

Chilian Andes (Leybold).

Salvin-Godman Coll.

## 3. Bolborhynchus orbignyi.

Myiopsitta orbygnesia, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 67 (descr. nulla); Souance, Rev. et Mag. de Zool. 1856, p. 63 (descr. manca); Bp. Naumannia, 1856, Consp. Psitt. n. 53; G. R. Gr. Hand-list, ii. p. 150, n. 8149 (1870).

Bolborhynchus orbygnesia, Souancé, Icon. Perr. pl. xxiv. f. 1 (1857). Conurus orbygnesius, G. R. Gr. List Psitt. Brit. Mus. p. 44 (1859). Conurus anrifrons, Sclat. & Salv. (nec Less.) P. Z. S. 1867, p. 988. Bolborhynchus dorbignyi, Finsch, Papay. ii. p. 129 (1868); Gieb. Thes. Orn. i. p. 469 (1872).

Bolborhynchus orbignesius, *Śclat. & Salv. P. Z. S.* 1868, p. 569, 1869, p. 154, 1879, p. 635; *Sclat. P. Z. S.* 1886, pp. 395, 396, 399.

Bolborhynchus orbignianus, Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 6 (1873).

? Conurus temminckii, Bp. in Mus. Paris, fide Tacz. P. Z. S. 1874, р. 549.

Bolborhynchus orbignyi, Rehnw. Journ. f. Orn. 1881, p. 347 (Consp. Psitt. p. 187); id. Vogelbild. Nachtr. 104 (1883); Tacz. Orn. Pér. iii. p. 211 (note) (1886).

Adult. Green; throat, breast, and abdomen yellowish green; under tail-coverts light green; bastard-wing and primary-coverts greenish blue; outer web of the quills dull blue, with narrow whitish edges; smaller under wing-coverts green, with a slight blue tinge on the outermost ones; greater under wing-coverts and quills below dusky grey; tail above green, below bluish: bill whitish; feet flesh-colour. Total length 7.5 inches, wing 4.1, tail 3.3, bill 0.48, tarsus 0.45.

Female. Like the male, only a little less yellowish and with a slight bluish tinge.

Hab. South-western Peru, North-western Chili, and Bolivia.

 $a, b. \not\subseteq Q$  ad. sk. Tinta, Peru, May, June (H. Tweeddale Coll. Whitely).

c. ♂ ad. sk. Tinta, Pern, May (H. Whitely). Salvin-Godman Coll. d. ♀ ad. sk. Chinata, S.W. Peru, July (H. Sclater Coll.

Whitely).Tarapacá, Chili, Jan. (Rah $e, f. \ \exists \ Q \ ad. \ sk.$ Sclater Coll.

mer). g. Ad. st. Bolivia. T. Bridges [C. ].

h. Ad. sk. Lake of Titicaca, Bolivia. J. Pentland, Esq. [P.]. i. Ad. sk. Lake of Titicaca, Bolivia, May Sclater Coll. (D. Forbes).

Parlapsiagi.

# 4. Bolborhynchus aurifrons.

Psittacus (Lathamus) aurifrons, Less. Cent. Zool. p. 63, pl. 18 (1830). Latham à front jaune, Less. Tr. d'Orn. p. 205 (note) (1831).

Latham a front jaune, Less. Ir. a Orn. p. 200 (note) (1991).

Trichoglossus aurifrons, Wagl. Mon. Psitt. p. 547 (1832).

Conurus aurifrons, Bourj. Perr. pl. 45 (1837-38); G. R. Gr. Gen. B.

ii. p. 414, n. 41 (1845); id. List Psitt. Brit. Mus. p. 44 (1859);

Honey. Journ. f. Orn. 1859, p. 361; Sclat. Cat. Am. B. p. 351,

n. 2003 (1862); Schleg. Mus. P.-B. Psittaci, p. 15 (1864); Sclat.

P. Z. S. 1866, p. 100; Sclat. & Salv. P. Z. S. 1867, p. 988; Salv.

D. D. Psittaci, Register p. 14 Ibis, 1871, p. 88 (note); Schleg. Mus. P.-B. Psittaci, Revue, p. 4 (1874).

Lathamus aurifrons, Less. Compl. de Buff., Ois. ed. 2, p. 609 (1838). Psittacus aurifrons, Less. Rev. et Mag. de Zool. 1842, p. 135. Conurus sitophagus, Tsch. Wiegm. Arch. 1844, i. p. 304; id. Faun.

Per. p. 273 (1844).

Conurus agilis, Licht. Nomencl. Av. p. 73 (1854). Myiopsitta aurifrons. Bp. Rev. et May. de Zool. 1854, p. 151, n. 63: Souancé, Rev. et Mag. de Zool. 1856, p. 63; Bp. Naumannia, 1856, Consp. Psitt. n. 52; Sousa, Mus. Nac. Lisb. Psittaci, p. 10 (1869); G. R. Gr. Hand-list, ii. p. 150, n. 8148 (1870).

Conurus? frontalis, Deville, Bp. Naumannia, 1856, Consp. Psitt.

in syn. n. 52.

Myiopsitta sitophagus, Bp. Naumannia, 1856, Consp. Psitt. n. 55. Bolborhynchus aurifrons, Souancé, Icon. Perr. pl. xxiv. f. 2 (2) (1857); Finsch, Papag. ii. pp. 126, 949 (1868); Gieb. Thes. Orn. i. p. 469 (1872): Sund. Meth. nat. Av. disp. Tent. p. 71 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 5 (1873); Tacz. P. Z. S. 1874, p. 549, 1880, p. 211; Rehnw. Journ. f. Orn. 1881,
p. 347 (Consp. Psitt. p. 187): id. Vogelbild. Nachtr. 104 (1883);
Tacz. Orn. Pér. iii. p. 210, Tabl. p. 99 (1886).

Brotogerys (!) aurifrons, Nation, P. Z. S. 1885, p. 279 \*.

Adult male. Green: forehead, lores, anterior part of the cheeks, and throat yellow; middle of the breast, a band across the lower part of the same, and sides also yellow; vent and under tail-coverts light green; bastard-wing and primary-coverts greenish blue; primaries blue on the outer webs, and edged with whitish; smaller under wing-coverts bluish green; greater under wing-coverts and quills below dusky, with a slight bluish tinge on the inner webs; tail above green, below bluish green: "bill yellowish white; cere orange; feet reddish yellow; iris greyish yellow" (Taczanowski). Total length 6.6 inches, wing 3.7, tail 3.3, bill 0.5, tarsus 0.45.

Female. Has no yellow on the face; only on the chin and on the sides of the breast there is a yellowish tinge; the whole of the underparts greener than in the male, but paler than the upper

parts.

Hab. Peru.

Lima, Peru. Purchased. a. Ad. sk. b. Q ad. sk. c. Ad. sk. Lima, Peru (Jelski). Sclater Coll. Sclater Coll. W. Peru. d, e. Ad. sk. E. Wilson, Esq. [P.]. —— ? (Delattre). Zoological Soc. Coll. f. Ad. sk. Chili.

<sup>\*</sup> It seems very likely that the following synonyms also belong to B. aurifrons:-

<sup>?</sup> Psittacus jaguilma. Mol., Saggio Stor. Nat. Chili, pp. 257, 343 (1782); Gm. S. N. i. p. 324, n. 69 (1788); Lath. Ind. Orn. i. p. 96, n. 40 (1790); Shaw, Gen. Zool. viii. 2, p. 442 (1811); Bechst. Kurze Ueb. p. 73 (1811–12); Vieill. N. D. xxv. p. 365 (1817); id. Enc. Meth. iii. p. 1399 (1823); Poeppig, Froriep's Notiz. xxiii. p. 280 (1829); Wagl. Mon. Psitt. p. 743 (1832).

<sup>?</sup> Jaquilma Parrakeet, Lath. Syn. Suppl. ii. p. 85 (1802); id. Gen. Hist. ii. p. 154 (1822).

Psittaeus jaguilma, Kuhl, Consp. Psitt. p. 94 (1820).

## 5. Bolborhynchus andicola. (Plate V.)

Psittacula andicola, Finsch, P. Z. S. 1874, p. 90; Sclat. & Salv. P. Z. S. 1874, pp. 678, 679; Rehnw. Journ. f. Orn. 1881, p. 349 (Consp. Psitt. p. 189); id. Voyelbild. Nachtr. 105 (1883); Nation, P. Z. S. 1885, p. 279; Sclat. ibid. (note); Ridgw. Pr. U. S. Nat. Mus. x. p. 529 (1887).

Bolborhynchus orbignesius, Tacz. (nec Bp.) P. Z. S. 1874, pp. 549,

679.

Bolborhynchus andicola, Sclat. & Salv. P. Z. S. 1876, p. 18; Tacz. Orn. Pér. iii. p. 211, Tabl. p. 100 (1886).

Adult male. Deep green; forehead, sides of the head, and underparts with a yellowish tinge; under tail-coverts bright green; outer web of the primaries bluish green with greener edges; smaller under wing-coverts green, greater ones and inner webs of the primaries below bluish green; tail green, duller underneath; bill horn-grey, with the tip whitish; feet pale brown; iris dark brown. Total length about 7 inches, wing 4·3, tail 2·6, bill 0·5, tarsus 0·55.

Female. Like the male, but apparently duller, and with scarcely any yellowish tinge on the forehead, sides of the head, and underparts.

Hab. Peru.

a. Ad. sk. Paneartambo, Peru, Feb. Sclater Coll. (Туре (H. Whitely). of species.) Paucartambo, Peru, Jan. b. of ad. sk. Salvin-Godman Coll. (H. Whitely). c, d. ♂ ♀ ad. sk. Lima, Peru (Nation). Sclater Coll. e. ♀ ad. sk. f. ♀ ad. sk. Maraymoc, Peru. Sclater Coll. Punamarca, C. Peru (Jel-Sclater Coll. ski).

nannopeoble es

# 6. Bolborhynchus panychlorus.

Brotogerys panychlorus, Salv. & Godm. Ibis, 1882, p. 211, pl. ix. f. 1; Rehnw. Journ. f. Orn. 1884, p. 234; Rehnw. u. Schal. Journ. f. Orn. 1885, p. 459; Salv. Ibis, 1886, pp. 68, 509.
Psittacula panychlora, Rehnw. Journ. f. Orn. 1884, p. 235.

Male. Green; underparts paler; under the eyes yellowish; lores, chin, and sometimes also the forehead and under tail-coverts, tinged with yellow; wings blackish, externally green, carpal edge pale yellow; greater under wing-coverts and inner web of the quills below bluish green; tail green, underneath bluish green: bill dusky; feet pale brown. Total length 5.5-6 inches, wing 3.7; tail, middle feathers 1.85, lateral feathers 1.5; bill 0.49, tarsus 0.4.

Female. Like the male, only greener, and with less yellow colour on the face and under tail-coverts.

Hab. Roraima, British Guiana.

Salvin-God-Roraima, Brit. Guiana, Jan., Types Nov. (II. Whitely). man Coll.  $d, e. \ \mathcal{J} \ \mathcal{Q} \ \text{ad. sk.}$ Roraima, Brit. Guiana, Jan. Sclater Coll. species. (H. Whitely). f. 3 ad. sk. Roraima, Brit. Guiana, Jan. Sclater Coll. (H. Whitely).

### 7. Bolborhynchus lineolatus.

Psittacula lineola, Cass. Pr. Acad. Philad. vi. p. 372 (Mexico) (1853); id. Journ. Acad. Philad. iii. p. 154, pl. xiv. f. 1 (1855); Sclat. P. Z. S. 1857, p. 230.

Myiopsitta tigrina, Souancé, Rev. et Mag. de Zool. 1856, p. 144 (Venezuela); Bp. Compt. Rend. xlii. p. 764 (1856), xliv. p. 538

(1857); Sclat. P. Z. S. 1864, p. 178 (obs.).

Myiopsitta lineola, Bp. Naumannia, 1856, Consp. Psitt. n. 54; Zeled. Pr. U. S. Nat. Mus. viii. p. 111 (1885); Ridgw. Man. N. Am. Birds, p. 269 (note) (1887).

Psittacula lineolata, Sclat. P. Z. S. 1856, p. 306; Baird, B. N. Am.

p. 66 (1858).

Myiopsitta catharina, *Bp. Compt. Rend.* xliv. p. 538 (1857). Bolborhynchus catharina, "*Bp.*," *Selat. P. Z. S.* 1857, p. 225; *Selat.* & Salv. Ibis, 1859, p. 137 (in syn. C. lineolati); G. R. Gr. Handlist, ii. p. 149, n. 8143 (1870).

Conurus lineolatus, Sclat. & Salv. Ibis, 1859, p. 137, 1862, p. 96;

Salv. Ibis, 1869, p. 319.
Conurus lineola, G. R. Gr. List Psitt. Brit. Mus. p. 44 (1859); Sclat. P. Z. S. 1864, p. 177.

Bolborhynchus tigrinus, "Bp.," G. R. Gr. List Psitt. Brit. Mus., in

syn. C. lineolæ, p. 44 (1859). Conurus catharina, G. R. Gr. List Psitt. Brit. Mus. p. 45 (1859).

Bolborhynchus lineolatus, Finsch, Papag. ii. p. 130 (1868); Salv. Ibis, 1871, pp. 87, 94; Gieb. Thes. Orn. i. p. 469 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 7 (1873); Rehnw. Vogelbild. t. xxviii. f. (1878–83); id. Journ. f. Orn. 1881, p. 348 (Consp. Psitt. p. 188); Sclat. P. Z. S. 1886, p. 417.

Bolborhynchus lineola, G. R. Gr. Hand-list, ii. p. 149, n. 8144

(1870).

Bolborhynchus tigrina, Salv. Ibis, 1871, p. 95.

Adult male. Dull green above and on the sides; head above brighter; forehead, sides of the head, and middle of the underparts yellowish green; upper parts, sides of the neck and of the body with cross black bands on the edges of the feathers; feathers of the rump and upper and under tail-coverts with black spots at the tips; smaller upper wing-coverts black, the median and the greater ones with black spots at the tip; bastard-wing blackish; primary-coverts black edged with green; earpal edge yellowish green; first primary black, the remainder black with green outer webs; greater under wing-coverts and quills underneath black, with the inner webs bluish green; tail-feathers above green, with the median part black, below bluish green: bill horn-yellowish white; feet flesh-eolour. Total length 6.7 to 7 inches, wing 4.1, tail 2.3, bill 0.5, tarsus 0.45.

Female. Like the male.

Hab. From Southern Mexico to Veragua.

Some specimens have less black on the wing-coverts and a bluish tinge on the head; apparently they are young or immature birds.

It has been said that this bird occurs in the island of Cozumel, on the authority of Dr. Cabot, but more recent collectors have not found it there. Also the locality Venezuela, mentioned by De Souancé, requires confirmation.

<ul> <li>a. Ad. sk.</li> <li>b. Ad. sk.</li> <li>c, d. Ad. sk.</li> <li>e. of ad. sk.</li> </ul>	Mexico (White). Mexico (White). Mexico. Coatepec, State of Vera Cruz, Mexico, Aug. (J. Ferrari-Perez).	Sclater Coll. Salviu-Godman Coll. Sallé [C.]. Salvin-Godman Coll.
f, g. Ad. sk.	Vera Paz, Guatemala (O. Salvin).	Salvin-Godman Coll.
h, i. ♀ ad. et ad.	Volcan de Fuego, Guatemala, Nov. (O. Salvin).	Salvin-Godman Coll.
k. 3 ad. sk.	Volcan de Fuego, Guatemala, Nov. (O. Sulvin).	Sclater Coll.
l. 3 ad. sk.	Angostura, Costa Rica, Feb. (J. Carmiol).	Salvin-Godman Coll.
m, n.	Volcan de Chiriqui ( <i>Arcé</i> ). Veragua.	Salvin-Godman Coll. Salvin-Godman Coll.

### 15. PSITTACULA.

Type.

Psittacula \*, Cuv., fide Ill. Prodr. Mamm. et Av. p. 200 (1811); Kuhl, Consp. Psitt. p. 8 (1820) . . . Psittaculus, Spix, Av. Bras. i. p. 38 (1824) . . . . . . . . . P. passerina. Agapornis, Sw. (nec Selby) Class. B. ii. p. 301 (1837) . P. cyanoptera. Forpus, Boie, 1858 (fide G. R. Gr. Hand-list, ii. p. 166, 1870).

(Cf. Ridgway, Pr. U. S. Nat. Mus. x. pp. 529-548.)

Range. From Mexico to Brazil and Bolivia.

# Key to the Species.

a. Rump in the adult male ultramarine-blue, more or less deep.

a'. Back, scapulars, innermost upper wingcoverts, and tertials greenish grey; a blue streak behind the eyes; female with no blue whatever, and with rump bright

b'. Back, scapulars, smaller wing-coverts, and tertials green, like the head.

a". Orbital region cobalt-blue; female with no blue whatever, and with orbital

v cælestis, p. 241.

region and rump emerald-green..... conspicillata, p. 243.

<sup>\*</sup> Psittacula is often attributed to Brisson, who, however, did not use it generically.

 $b^{\prime\prime}$ . Orbital region with no blue colour.

a'''. Upper mandible dusky brown. Larger than P. passerina and very dark green; female with no blue whatever, and with the forehead, sides of the head, and throat yellowish green...

b"". Upper mandible, like the under mandible, whitish.

 $a^4$ . Greener.

 $a^5$ . Forehead, cheeks, and lower parts more or less yellowish green; female with no blue whatever, with  $_{
m the}$ rump emerald-green, and with forehead, cheeks, and lower parts decidedly yellowish green ....

b<sup>5</sup>. Forehead and cheeks pure green, with no yellow tinge whatever; blue colour of the rump and wings a shade lighter; bill thick and robust; female unknown .....

b4. Paler and more yellowish; forehead, cheeks, and underparts distinctly yellowish green; female unknown .....

b. Rump in the adult male turquoise-blue. c'. Under wing-coverts turquoise-blue like the rump; female with no blue what-ever, and with rump bright green; quills (except tertials) darker green than coverts ..... vyanopygia, p. 249.

d'. Under wing-coverts bicoloured, dark ultramarine-blue, surrounded by a distinct outer margin of bluish green; female "with the rump and under wing-coverts Paris-green" (Ridgway) . . . . .

c. Rump in the adult male emerald-green; under wing-coverts bicoloured, dark ultramarine-blue, surrounded by a distinct outer margin of bluish green; upper greater wingcoverts emerald-green, more or less tinged with light cobalt-blue; primary-coverts green, the innermost deep ultramarine-blue; female with no blue whatever; inner webs of the quills underneath greenish...... quianensis, p. 251.

sclateri, p. 244.

crassirostris, p. 247.

flavescens, p. 248.

spengeli, p. 250.

#### 1. Psittacula cœlestis.

Agapornis cœlestis, Less. Echo du Monde Savant, 1844, t. 2 \*; id. Descr. Mamm. et Ois. p. 198 (1847). Psittacula coelestis, Lafr. Rev. Zool. 1848, p. 172; Bp. Rev. et Mag.

de Zool. 1854, p. 152, n. 133; Souancé, Rev. et Mag. de Zool.

<sup>\*</sup> I have not been able to find this quotation, which seems wrong, although given by Lesson himself (Descr. Mamm. et Ois. l. c.). VOL. XX.

1856, p. 157; Bp. Naumannia, 1856, Consp. Psitt. n. 132; Souancé, Icon. Perr. pl. xl. (♂♀) (1857); G. R. Gr. List Psitt. Brit. Mus. p. 86 (1859); Sclat. P. Z. S. 1860, p. 287; id. Cat. Am. B. p. 357, n. 2137 (1862); Finsch, Papag. ii. 2, p. 666 (1868); Sousa, Mus. Nac. Lisb. Psittaci, p. 14 (1869); G. R. Gr. Hand-list, ii. p. 166, n. 8351 (1870); Salv. Ilis, 1871, p. 88 (note); Sclat. §. Salv. Nomencl. Ar. Neotrop. p. 115, n. 6 (1873); Gieb. Thes. Orn. iii. p. 327 (1877); Tacz. P. Z. S. 1877, pp. 329, 753, 1880, p. 211; Rehnw. Journ. f. Orn. 1881, p. 350 (Consp. Psitt. p. 190); id. Vogelbild. Nachtr. 107 (1883); Berl. §. Tacz. P. Z. S. 1883, p. 574; Tacz. §. Berl. P. Z. S. 1885, p. 122; Tacz. Orn. Pér. iii. p. 214, Tabl. p. 100 (1886); Ridgw. Pr. U.S. Nat. Mus. x. p. 537 (1887); Hartl. Journ. f. Orn. 1889, p. 113.

? Psittacula passerina, Sclat. (nec Linn.) P. Z. S. 1854, p. 115

(Ecuador).

Psittaculus coelestis, Schleg. Mus. P.-B. Psittaci, p. 32 (1864); id. op. cit. Rerue, p. 9 (1874).

Adult male. Dull green; forehead, crown, cheeks, and chin bright grass-green; behind the eye a blue stripe; occiput and nape bluish grey; back, scapulars, innermost upper wing-coverts and innermost quills greenish grey; lower back, rump, secondaries, base of the shorter primaries, greater wing-coverts, under wing-coverts, and axillars deep blue, darker on the rump; apical portion of the primaries green; upper tail-coverts bluish green; underparts green, tinged with greyish on the sides of the breast and on the flanks; tail green: "bill whitish; feet flesh-colour; iris brown" (Taczanowski). Total length about 5 inches, wing 3·3, tail 1·5, bill 0·5, tarsus 0·45.

Female. No trace of blue anywhere; upper parts less greyish and rather brighter green than in males; top and sides of the head less pure yellowish green than in the male; the lower back and rump bright green, inclining to emerald; lower parts entirely apple-green; under wing-coverts and axillars similar but less yellowish; quills underneath dusky grey.

Young male. Similar to the adult female, but "postocular region decidedly tinged with blue" (Ridgway), and rump bluish green

more or less tinged with ultramarine or deep blue.

Hab. Equador and Peru \*.

#### PSITTACULA CŒLESTIS LUCIDA.

Psittacula cœlestis lucida, Ridgw. Pr. U.S. Nat. Mus. x. p. 538 (1887).

Adult male. "The top and sides of the head are decidedly more yellowish green (than in P. cælestis); the lower parts also are lighter and more yellowish green, with the sides and flanks strongly olive-buff; the mantle is conspicuously browner, or light brownish olive-green, and the blue of the rump &c. is lighter, being of a rich smalt-blue hue. In short, the different colours are far more conspicuously contrasted and the bird much handsomer. Wing 3·30 inches, tail 1·80, culmen 0·51.

" Hab. Colombia (Lafresnaye collection)."

<sup>\*</sup> I have not been able to identify the following subspecies:-

a. Ad. sk.	—— ? (Delattre).	E. Wilson, Esq. [P.].
b. ♂ ad. sk.	Guavaquil, Ecuador (Boucard).	Salvin-Godman Coll.
c. Ad. sk.	Guayaquil, Ecuador.	Sclater Coll.
d, e. Ad. sk.	Guayaquil, Ecuador.	Capt. Kellet and
	. 1 /	Lieut, Wood [P.].
f. Ad. sk.	Puna Island, Ecuador (Buckley).	Salvin-Godman Coll.
g. Ad. sk.	Santa Rita, Ecuador (Buckley).	Salvin-Godman Coll.
h. Ad. sk.	Babahoyo, Ecuador (Fraser).	Sclater Coll.
i. Ad. sk.	S. America.	G. Barclay, Esq. [P.].

## 2. Psittacula conspicillata.

Psittacula conspicillata, Lafr. Rev. et Mag. de Zool. 1848, p. 172; Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 135; Sclat. P. Z. S. 1855, p. 162; Souancé, Rev. et May. de Zool. 1856, p. 156; Bp. Naumannia, 1856, Consp. Psitt. n. 133; Souancé, Icon. Perr. pl. xli. (♂♀) (1857); G. R. Gr. List Psitt. Brit. Mus. p. 86 (1859); Selat. Cat. Am. B. p. 351, n. 2136 (1862); Finsch, Papag. ii. 2, p. 663 (partim) (1868); G. R. Gr. Hand-list, ii. p. 166, n. 8352 (1870); Salv. Ibis, 1871, p. 88 (note); Selat. & Salv. Nomencl. Av. Neotrop. p. 115, n. 5 (1873); Gieb. Thes. Orn. iii. p. 327 (1877); Rehnw. Journ. f. Orn. 1881, p. 350 (Consp. Psitt. p. 190); id. Vogetbild. Nachtr. 108 (1878–83); Ridgw. Pr. U.S. Nat. Mus. x, p. 536 (1887); Havtl. Journ. f. Orn. 1889, p. 113.

Psittacula cyanopis, Licht. Nomencl. Av. p. 71 (1854).
Psittacula orbitula, Rchb. in Schaufuss Catal. 1862 (teste Finsch,

*Papag.* ii. p. 663).

Psittaculus conspicillatus, Schleg. Mus. P.-B. Psittaci, p. 32 (1864); id. op. cit. Revue, p. 8 (1874).

Adult male. Above dull green, becoming bright green on forehead, crown, and cheeks; orbital region cobalt-blue; lower back, rump, edge of the wing, secondaries, base of the shorter primaries, primary-coverts, greater upper wing-coverts, under wing-coverts, and axillars rich ultramarine-blue, darker on rump; upper tailcoverts green; lower parts dull malachite-green, with a slight greyish tinge on the breast; inner web of the quills bluish green; tail green: bill whitish; feet flesh-colour. Total length 4.7 inches, wing 3.25, tail 1.5, bill 0.5, tarsus 0.4.

Adult female. Green; no trace of blue anywhere; upper parts less dull and rather brighter green than in males; round the eyes and on lower back and rump bright green, inclining to emerald; lower parts entirely apple-green; under wing-coverts and axillars similar, but less yellowish; inner webs of the quills underneath

dull bluish green.

Young. No blue colour round the eyes; the blue on the rump and on the wings is mixed with green; under wing-coverts as in the female.

Hab. Colombia (and Eastern Ecuador).

a, b. Ad. sk.	[Nicaragua.]
c, d. Ad. sk.	Bogota.
e. Ad. sk.	Bogota skin.
f. Ad. sk.	Bogota (Villagomez).

E. Wilson, Esq. [P.]. Sclater Coll. Van Patten [C.]. Salvin-Godman Coll. g. Ad. sk. Vicinity of Bogota (G. Crow-Salvin-Godman Coll. ther).
 h. Ad. sk. Vicinity of Bogota (Bowman). Salvin-Godman Coll.

i-o. ♂♀ad. sk. Bogota. Purchased.

## 3. Psittacula sclateri. (Plate VI.)

Psittacula eyanopygia?, Selat. P. Z. S. 1857, p. 266 (Rio Javari Bates).

Psittacala sclateri, G. R. Gr. List Psitt. Brit. Mus. p. 86 (1859); Sclat. & Salv. P. Z. S. 1866, p. 197; Finsch, Papag. ii. 2, p. 660 (1868); Sclat. & Salv. P. Z. S. 1869, p. 568; G. R. Gr. Hand-list, ii. p. 166, n. 8354 (1870); Pelz. Orn. Bras. pp. 268, 448, liii (1871); Sclat. & Salv. Nomencl. Av. Neotrop. p. 115, n. 4 (1878); Sclat. & Salv. P. Z. S. 1873, p. 301; Gieb. Thes. Orn. iii. p. 330 (1877); Rehnw. Journ. f. Orn. 1881, p. 350 (Consp. Psitt. p. 190); id. Vogelbild. in the text of pl. xxviii. f. 2 (1878–83); Tacz. Orn. Pér. iii. p. 213, Tabl. p. 100 (1886); Ridgw. Pr. U.S. Nat. Mus. x. p. 535 (1887); Hartl. Journ. f. Orn. 1889, p. 113.

Psittaculus sclateri, Schleg. Mus. P.-B. Psittaci, p. 32 (1864).; id.

op. cit. Revue, p. 8 (1874).

Psittacula melanorhyncha, Natt. MS., fide Finsch, Papag. ii. 2, p. 660 (1868).

Adult male (type). Dark green, much darker than any other species of the genus; forehead and sides of the head brighter green; vent and under tail-coverts paler; breast and flanks with a slight olive tinge; lower back, rump, bastard-wing, greater wing-coverts, secondaries, innermost primaries, under wing-coverts, and axillars deep or smalt-blue; inner webs of the quills and greater under wing-coverts bluish green, with no yellow edgings; tail green, underneath with a slight bluish tinge: upper mandible dusky brownish, lower mandible whitish; feet, in dried skins, pale brownish. Total length about 5 inches, wing 3·2, tail 1·5, bill 0·43, tarsus 0·36.

Adult female. Dark green, a little brighter on the rump; forehead, sides of the head, and throat yellowish green, the remainder of the underparts lighter green than the upper parts; under wingeoverts bright green like the rump; greater under wing-coverts and quills below dusky black, with a very slight tinge of bluish

green; bill and feet as in the male.

Hab. Upper Amazons, Ecuador, and Peru.

The last specimen mentioned in the following list, smaller and vellower below, is doubtfully referred to the present species.

Rio Javari. H. W. Bates [C.] a. Ad. sk. (Type of species.) Yquitos, Upper Amazons, Salvin-Godman Coll. b. 3 ad. sk. June (Whitely). c, d. Ad. sk. Sarayaeu, Ecuador (Buckley). Salvin-Godman Coll. e, f, g. 3 2 ad. sk. Cosnipata, Peru, Oct. Tweeddale Coll. (Whitely). Cosnipata, Peru, Sept. h, i. & ad. Fk. H. Whitely [C.].

k, l.  $d \circ 2$  ad. sk. Cosnipata, Peru, Sept., Nov. H. Whitely [C.] \*. (var.). m. ♂ ad. sk. Cosnipata Valley, E. Peru, Salvin-Godman-Coll. Oct. (Whitely). Cosnipata, Peru, Sept., Oct. Sclater Coll. (Whitely). p. 3 ad. sk. Sarayacu, Écuador. E. Bartlett [C.]. Oyapock (?) (fide J. Ver- Purchased †. 9. [d]sk. reuux).

## 4. Psittacula passerina.

Tui-ete, Marcgr. Hist. Bras. libr. ix. p. 206 (1648).

Least green and blue Parraqueet, Edw. Glean. v. pl. 235, lower fig.

(1758).

Psittacula brasiliensis uropygio cyaneo, Briss. Orn. iv. p. 384 (1760). Psittacus passerinus, Linn. S. N. i. p. 150, n. 47 (1766); Gm. S. N. i. p. 342, n. 47 (1788); Lath. Ind. Orn. i. p. 133, n. 156 (1790); Shaw, Gen. Zool. viii. 2, p. 556 (1811); Beckst. Kurze Ueb. p. 85 (1811); Vieill. N. D. xxv. p. 378 (partim) (1817); Neuwied, Reis. (1811); Vietal, N. D. XXV. p. 348 (partim) (1811); Neuwied, Reis, Bras, ii. p. 341 (1821); Hahn, Vög. aus As. etc. Liefr, xt. t. 1 (1822); Vieill. Enc. Méth. iii. p. 1409 (1823); Voigt, Cuv. Ueb. p. 745 (1831); Neuwied, Beitr. iv. p. 260 (1832); Hahn, Orn. Atl., Papag. p. 19, t. 8. f. a ♂, b ♀ (1834); Dub. Orn. Gal. pl. 60 A (1839); Thienem. Fortpflanz. d. yes. Vög. p. 78 (1846); Russ, Journ. f. Orn. 1868, p. 213.
Enano, Azara, Apunt. Hist. nat. Parag. i. p. 463, n. 288 (1803).

Le Perroquet nain, Azara, Voy. (ed. Sonn.), p. 78 (1809).

? Psittaculus passerinus, Spix, Ao. Bras. i. p. 38, t. 33. f. 1 (1824); Brehm, Mon. d. Papag. t. 32; Schleg. Mus. P.-B. Psittaci, p. 30 (part.) (1864); id. op. cit. Revue, p. 8 (part.) (1874).

? Psittaculus xanthopterygius (part.), Spix, Av. Bras. i. p. 38, t. 34.

f. 2 (nestling) (1824).

\* Both specimens have a large yellow spot on the occiput.

† I have not been able to identify with certainty the following species:-

### PSITTACULA MODESTA.

Psittacula modesta, Cab. in Schomb. Guian. iii. p. 727 (1848); G. R. Gr. List Psitt. Brit. Mus. p. 87 (1859); id. Hand-list, ii. p. 166, n. 8355 (1877); Salv. Ibis, 1886, p. 70; Ridgw. Pr. U. S. Nat. Mus. x. p. 547 (1887).

"A single specimen marked as a male, without any blue, is distinguished from the female of P. passerina by being of a somewhat larger size and particularly by its broader bill. Forehead and anterior part of the crown, as well as the whole underside, yellowish green; the green of the upperside is less vivid and darker (similar to that of *P. tuipara*); remiges black. Rump, under wing-coverts, and outer margins of the primaries grass-green; the inner margin of the remiges tinged with dull bluish green. Upper mandible dark brown; lower mandible light. Total length 5 inches 8 lines, wing 31 inches, tail 1 inch 8 lines, middle toe, without claw, 63 lines."

Hab. British Guiana.

Obs. The above description seems to me to apply pretty well to Psittacula sclateri, and Mr. Salvin quotes Graf von Berlepsch's opinion as to the identity of P. modesta with P. sclateri; Mr. Ridgway has also expressed the same opinion. Graf von Berlepsch, who has recently examined the typical specimen in the Museum of Berlin, has sent me a description of it, which agrees in every respect with the female of Psittacula sclateri.

Psittaculus gregarius, Spix, Ar. Bras. i. p. 39, t. 34. figs. 3, 4

Psittacula passerinus (part.), Steph. Gen. Zool. xiv. p. 140 (1826). ? Psittacula xanthopterygia (part.), Steph. Gen. Zool. xiv. p. 146 (1826); G. R. Gr. List Psitt. Brit. Mus. p. 87 (part.) (1859); id.

Hand-list, ii. p. 166, n. 8356 (1870).
Psittacula passerina, Less. Tr. d'Orn. p. 203 (1831); Wayl. Mon. Psitt. p. 616 (1832); Hartl. Syst. Verz. Ges. Mus. p. 88 (1844); G. R. Gr. Gen. B. ii. p. 422, n. 2 (part.) (1846); Schomb. Reix. Guian. iii. p. 726 (1848); ? Sclat. P. Z. S. 1854, p. 115; Licht. Nomencl. Av. p. 71 (1854); Bp. Rev. et May. de Zool. 1854, p. 152, Nomenci. Av. p. 11 (1854); Bp. Rev. et Mag. de Zool, 1854, p. 152, p. 156; Bp. Naumannia, 1856, Consp. Psitt. n. 130; Burm. Syst. Ueb. ii. p. 197 (1856); G. R. Gr. List Psitt. Brit. Mus. p. 85 (1859); Homey. Journ. f. Orn. 1859, p. 361; Sclat. Cat. Am. B. p. 357, n. 2134 (1862); ? Layard, B. of S. Afr. p. 231 (1867); Sclat. & Salv. P. Z. S. 1867, p. 749 (note); Finsch, Papag. iii. pp. 648, 666 (part.) (1868); Sousa, Mus. Nac. Lisb. Psittei p. 14 (part.) (1869); Papag. Leven. f. Orn. 1869, p. 76. Psittaci, p. 14 (part.) (1869); Russ, Journ. f. Orn. 1869, p. 76; Brehm, Journ. f. O'n. 1869, p. 139; Russ, Journ. f. O'n. 1870, p. 154; G. R. Gr. Hand-list, ii. p. 166, n. 8349 (1870); Pelz. Orn. Bras. pp. 267 (part.), 448, liii (1871); Lühder, Journ. f. Orn. 1871, p. 347; Sund. Meth. nat Av. disp. Tent. p. 69 (1872); Stölk. Journ. f. Orn. 1872, p. 3; Sclat. & Salv. Nomencl. Av. Neotrop. p. 115, n. 1 (1873); Garrod, P. Z. S. 1873, pp. 466, 634, 1874, p. 587; Cab. Jown. f. Orn. 1874, p. 228; Berl. Journ. f. Orn. 1874, p. 283; Gieb. Thes. Orn. iii. p. 329 (part.) (1877); Rehnw. Vogelbild. t. xxviii. f. 2 (1878–83); id. Journ. f. Orn. 1881, p. 349 (Consp. Psitt. p. 189); Forbes, Ibis, 1881, pp. 338, 353; Salv. Cat. B. Strickl. Coll. p. 462 (1882); Sclat. List Vert. An. 8th ed. p. 335 (1883); Salv. Ibis, 1886, p. 70; Ridgw. Pr. U.S. Nat. Mus. x. pp. 538, 548 (1887); Berl. Journ. f. Orn. 1887, pp. 26, 122 (Paraguay); Hartl. Journ. f. Orn. 1889, p. 113; Marsh. Papag. p. 55 (Barbados) (1889).

? Conurus xanthopterygius, part., Bourj. Perr. pl. 47. f. 2 (1837–38).

Conurus gregarius, Bourj. Perr. pl. 49 (1837-38).

Conurus passerinus, Bourj. Perr. pl. 50 (1837-38); Schleg. Dierent. p. 81 (1864).

Agapornis cyanopterus, Sw. (nec Bodd.) An. in Menag. p. 320 (1838).

Psittacula gregaria, Cab. in Schomb. Guian, Reis. iii. p. 727 (1848); Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 132.

Psittacula chrysogaster, Parzud. in Mus. Brit.; Finsch, Papag. ii. p. 654 (1868).

? Psittacula cyanoptera, Salv. (nec Bodd.) Ibis, 1886, p. 70.

Psittacula passerina vivida, Ridgw. Pr. U.S. Nat. Mus. x. p. 539 (Bahia district) (1887); *Ibis*, 1889, p. 128; *Hartl. Journ. f. Orn.* 1889, p. 113.

Adult male. Green; forehead, and sometimes all round the base of the bill, cheeks and underparts paler, apple-green; round the eyes and ear-coverts emerald-green; lower back, rump, secondaries (except tertials), shorter primaries, primary-coverts, bastard-wing, greater upper wing-coverts, under wing-coverts, and axillars rich ultramarine-blue, generally the greater wing-coverts lighter than the secondaries; inner webs of the quills underneath bluish green;

tail green: bill whitish; feet dusky. Total length 5 inches, wing 3.3, tail 1.5, bill 0.5, tarsus 0.42.

Adult female. Without any blue whatever; above green, brighter, more emerald-green on rump; underparts yellowish green, some-

times forehead and cheeks yellower than lower parts.

Young male. "Similar to adult female, but with secondaries, shorter primaries, and innermost primary-coverts blue, the rump and under wing-coverts also sometimes interspersed with bright blue feathers." (Ridgway.)

Hab. Brazil.

Mr. Ridgway confines the true *P. passerina* to the Ceara District of Eastern Brazil, between Cape St. Roque and the mouth of the Amazon, while he makes a subspecies (*Psittacula passerina vivida*) of the birds from the Bahia District; the latter he states to be darker or purer green, both above and below, with rump of the male rich ultramarine instead of cobalt, while the Ceara bird, according to Mr. Ridgway, "is light parrot-green, becoming more yellowish green on forehead, where, as also all round base of the bill, it is yellowish apple-green; sides of head and entire lower parts apple-green; lower back, rump, secondaries (except tertials), shorter primaries, primary-coverts, alula, greater coverts, under wing-coverts, and axillars uniform rich cobalt-blue."

There is no specimen in the British Museum from the Ceara District, so that I am not able to test the differences pointed out by Mr. Ridgway; but, as a matter of fact, I can state that the majority of specimens from the Bahia District, which, according to Mr. Ridgway, ought to belong to the darker and purer green race, have a good deal of yellowish tinge about the forehead, cheeks, and

lower parts.

a. Ad. st. S. America. Zoological Society's Coll. b. Ad. st. S. America. Purchased. Salvin-Godman Coll. c, d. Ad. sk. Pernambuco, Brazil (Forbes). e. [♀] ad. sk. Pernambuco, Brazil (Forbes). Sclater Coll. Sclater Coll. f. ♂ ad. sk. Bahia, Brazil (Wucherer). g, h, i. Ad. sk. Bahia, Brazil (Wucherer). Salvin-Godman Coll. k. Ad. sk. Novo Fribourgo, S.E. Brazil Salvin-Godman Coll. (Youds). $l, m. \not \subseteq \text{ad. sk.}$   $n, o. \not \subseteq \text{ad. sk.}$ São Paulo, Brazil (Joyner). Salvin-Godman Coll. Rio Claro, Brazil (Joyner). Salvin-Godman Coll. p, q. ♂ ♀ ad. sk. Sclater Coll. Brazil. r, s. Ad. sk. S. America. J. Gould, Esq. [P.]. t. ♀ ad. sk. Purchased. u. Ad. sk. (var.). Brazil. Massena Coll. (Type of P. chrysogaster, Parz.) v. Skeleton.

#### 5. Psittacula crassirostris.

Psittacula conspicillata, part., Finsch, Papag. ii. 2, pp. 664, 665 (Rio Napo) (1868).
Psittacula passerina, Sclat. & Salv. (nec Linn.) P. Z. S. 1873, p. 301

(Nauta, E. Peru); Tacz. P. Z. S. 1882, p. 46; id. Orn. Pér. iii.

 p. 212, Tabl. p. 100 (1886) \*.
 Psittacula crassirostris, Tucz. P. Z. S. 1883, p. 72 (Yurimaguas, E. Peru); Rehnw. u. Schal. Journ. f. Orn. 1885, p. 460; Tacz. Orn. Pér. iii. p. 215, Tabl. p. 100 (1886); Ridgw. Pr. U.S. Nat. Mus. x. p. 534 (1887); Hartl. Journ. f. Orn. 1889, p. 113.

Adult male. Very much like the male of P. passerina from Bahia District, but smaller, darker and purer green; forehead and cheeks brighter or emerald-green; ultramarine-blue colour on the rump, and wings a shade paler; bill thicker and more robust: "irides yellow" (Hauxwell); bill whitish; feet dusky flesh-colour. Total length about 5 inches, wing 3.1, tail 1.4, bill 0.5, tarsus 0.41.

Young (type of P. crassirostris). Differs from the adult in having the rump green (a little brighter than the rest of the upper parts), and the under wing-coverts also green; a few blue feathers scattered along the carpal edge, only one feather of the bastard-wing

blue, and the outermost greater wing-coverts green.

Hab. Peruvian Amazons.

Through the kindness of Dr. Stolzmann, I have been able to examine the type of *P. crassirostris*, and find that it has nothing whatever to do with P. guianensis, with which it has been compared by Taczanowski. It is an immature bird, as shown by a few blue feathers along the carpal edge, scattered among the green ones; it has the primary-coverts, the inner primaries, and the secondaries blue, exactly like P. passerina, the rump of a brighter green than the rest of the upper parts, and the under wing-coverts green. I feel pretty sure that its rump and under wing-coverts would have become blue, as in the adult specimens from Nauta and Samiria, mentioned below, if the bird had lived.

a. 3 ad. sk. b, c. of ad. sk. Nauta, Jan. Samiria, October (J. Hauxwell).

E. Bates, Esq. [C.]. Salvin-Godman Coll.

### 6. Psittacula flavescens.

Psittacula cyanopygia, G. R. Gr. (nec Sonaucé), List Psitt. Brit. Mus. p. 86 (Bolivia) (1859); id. Hand-list, ii. p. 166, n. 8353 (1870).

Adult male. Very much like the male of P. passerina, but the green colour all over paler and more yellowish; forehead, cheeks, and underparts distinctly yellowish green; blue colour of the rump and wings paler. Total length 5.3 inches, wing 3.4, tail 1.5, bill 0.5. tarsus 0.4.

Hab. Bolivia.

a. 3 ad. sk.

Bolivia.

T. Bridges [C.]. (Type of species.)

<sup>\*</sup> Taczanowski wrongly mentions the locality Rio Javari instead of Nauta.

## 7. Psittacula cyanopygia.

Psittacula evanopygia, Souancé, MS.; Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 136 (descr. nulla); Souancé, Rev. et Mag. de Zool. 1856, p. 157; Bp. Naumannia, 1856, Consp. Psitt. n. 134; Souancé, Icon. Perr. pl. 42 ( ζ ♀) (1851); Finsch, Abh. nat. Ver. Brem. 1870, p. 353 (Tres Marias); Salv. Ibis, 1871, p. 100; Lawr. Pr. Bost. Soc. N. H. xiv. pp. 270, 271 (1871); Salv. Ibis, 1873, p. 353; Sclat. & Salv. Nomencl. Av. Neotrop. p. 115, n. 3 (1873); Ridgw. Pr. U.S. Nat. Mus. x. p. 540 (1887); Hartl. Journ. f.

Orn. 1889, p. 113.

Psittacula cyanopyga, Finsch, Papag. ii. 2, p. 662 (1868); Salv. Ibis, 1871, pp. 87, 101 (partim); Lawr. Mem. Bost. Soc. N. H. ii. pt. 3, p. 297 (1874); Gieb. Thes. Orn. iii. p. 327 (1877); Rehnw. Journ. f. Orn. 1881, p. 350 (Consp. Psitt. p. 190); id. Vogelbild. in the text of pl. xxviii. f. 2 (1878-83); Ridgw. Man. N. Am. Birds, p. 269 (note) (1887); Salv. & Godm. Ibis, 1889, p. 242.

Psittaculus cyanopygius, Schleg. Mus. P.-B. Psittaci, p. 33 (1864);

id. op. cit. Revue, p. 9 (1874).

Psittacula insularis, Ridgw. Pr. U.S. Nat. Mus. x. p. 541 (Tres Marias) (1887); id. Ibis, 1889, p. 128; Hartl. Journ. f. Orn. 1886, p. 113.

Psittacula cyanopyga pallida, Brewst. Auk, vi. p. 85 (1889) (Sonora,

Mexico).

Adult male. Light green; forehead, sides of the head, and underparts paler; lower back, rump, under wing-coverts, and axillars turquoise-blue; primary-coverts, secondaries, and base of the shorter primaries deeper blue; edge of the wing green; inner web of the quills underneath and greater under wing-coverts bluish green, narrowly edged with yellowish; upper tail-coverts and tail green; tail-feathers edged with yellow on the inner webs: "bill pale dull yellowish, the basal half greyish horn-colour (wholly dull whitish in life); feet dusky (whitish or flesh-coloured in life?)" (Ridgway). Total length about 5 inches, wing 3.4, tail 1.6, bill 0.5, tarsus 0.45.

Adult female. Green; lower back, rump, and upper tail-coverts lighter but brighter; forehead, sides of the head, and underparts yellowish green; quills (except tertials) darker green than coverts:

no blue whatever.

Young male. Similar to the adult male, but blue of rump mixed with green feathers; primary-coverts green, with bluish along the median line, and the under wing-coverts and axillars mixed green and turquoise-blue.

Hab. Western Mexico, and Tres Marias Islands.

I have united to P. cyanopygia both P. insularis and P. cyanopyga pallida. Of the first there are in the British Museum three specimens from Tres Marias Islands, which are a little darker, but not larger, as stated by Mr. Ridgway, than the Mexican birds. Of the second, which is from Sonora, Mexico, two specimens are mentioned below; they only differ from typical P. cyanopygia in having a bluish tinge, probably connected with the abraded condition of the feathers; the bill is not stouter, the green colour of the upper parts has no ashy tinge, and the lower parts are neither lighter nor yellower than in typical P. cyanopygia.

a, b. Ad. st. [Bolivia.] Massena Coll. (Types of species.) c, d. ♂ ♀ ad. sk. Presidio, Mexico. Dec. (Forrer). Salvin-Godman Coll. Sierra de Alamos, Sonora, Mexico, May (*Lloyd*). e, f. 2 ad. sk. Salvin-Godman Coll. g. ♀ ad. sk. Bay of Manzanillo, W. Mexico Salvin-Godman Coll. Feb. (Xanthus). h. Ad. sk. Tres Marias Is. (Grayson). Sclater Coll. Tres Marias Is., Feb., April i. k. o 2 ad. sk. Salvin-Godman Coll. (Forrer).

### S. Psittacula spengeli.

Psittacula evanoptera, Cass. Pr. Ac. Nat. Sc. Phil. vii. p. 137 (1800) (Cartagena) (nec Psittacus evanopterus, Bodd.).

Psittacula spengeli, Hartl. P. Z. S. 1885, p. 614 (Baranquilla); id. Ibis, 1888, p. 493; Ridgw. Auk, v. p. 461 (1888); Hartl. Journ. f. Orn. 1889, p. 113.

Psittacula spengleri (errore), *Hartl. P. Z. S.* 1885, pl. 38, f. 1. Psittacula exquisita, *Ridgw. Pr. U.S. Nat. Mus.* x, p. 542 (1887) (Cartagena); *Hartl. Ibis.* 1888, p. 493 (= spengeli, *Hartl.*); *Ridgw. Auk*, v. pp. 461, 462 (1888); *Hartl. Journ. f. Orn.* 1889,

Adult male. Green, slightly tinged with greyish on the nape; forehead and sides of the head bright green; lower back, rump, and greater wing-coverts pale turquoise-blue; upper tail-coverts and underparts green, the concealed part of the feathers vellowish: innermost primary-coverts dark blue; quills green, the secondaries with a slight bluish tinge, and edged with lighter green; inner webs of the quills underneath greenish, narrowly edged with yellowish; edge of the wing bluish green, central portion of lining of wings deep blue: axillars turquoise-blue, the longer ones tipped with deep blue; tail green, the inner webs of the feathers yellow: bill whitish; feet flesh-colonr. Total length 4.8 inches, wing 3.2, tail 1.7, bill 0.5, tarsus 0.45.

Adult female. Green; "lower back and rump vivid Paris-green; greater wing-coverts light grass-green, edged with light Parisgreen; primary-coverts and secondaries deep grass-green, edged with paler: forehead gamboge-yellow, and under wing-coverts, with axillars, entirely light Paris-green. Otherwise much like the male. Length (skin) about 5 inches, wing 3.20, tail 1.95, culmen 0.45, tarsus 0.40." (Ridgway.)

Hab. Atlantic coast of Colombia, Baranquilla, Cartagena, and

Panama (?). There is some doubt about the locality of the specimen mentioned below.

Tweeddale Coll. a. 3 ad. sk. Panama (?) (McLeannan).

## 9. Psittacula guianensis.

Petite Perruche du Cap de Bonne Espérance, D'Aubent. Pl. Enl. 455. f. 1.

Prittacus capensis, Müll. S. N. Suppl. p. 80 (1767); Gm. S. N. i. p. 350, n. 133 (1788); Lath. Ind. Orn. i. p. 132, n. 153 (1790); Shaw, Nat. Misc. pl. 893 (1809); Shaw, Gen. Zool. viii. 2, p. 556 (1811); Bechst. Kurze Ueb. p. 84 (1811); Vieill. N. D. xxv. p. 372 (1817); id. Enc. Méth. iii. p. 1404 (1823); Cass. Pr. Ac. Nat. Sc. Philad. 1864, p. 240; Ridgw. Pr. U.S. Nat. Mus. x. p. 546 (1887).

? La Perruche aux ailes bleues, Buff. Hist. Nat. Ois. vi. p. 173

(1779).

? Blue-winged Parrakeet, Lath. Syn. i. 1, p. 317, n. 124 (1781); id. Gen. Hist. ii. p. 273, var. A (1822).

Psittaeus cyanopterus, Bodd. Tabl. Pl. Enl. p. 27 (nec p. 9)

(1783).

Psittacus passerinus, part., Kuhl, Consp. Psitt. p. 58 (1820).

Prittacus st. thomse, Kuhl (nec Müll.), Consp. Psitt. p. 58 (1820);

Ridgw. Pr. U. S. Nat. Mus. x. p. 546 (1887).

Psittacula passerina, part., Wagl. Mon. Psitt. p. 616 (1832); Bp. Consp. Av. i. p. 6 (part.) (1850); Finsch, Papag. ii. p. 648 (part.) (1868); id. (nec Linn.) P. Z. S. 1870, p. 586; Gieb. Thes. Orn. iii. p. 329 (1877).

Agapornis guianensis, Sw. Anim. in Menag. p. 320 (1837) (Deme-

rara).

Psittacula viridissima, Lafr. Rev. Zool. 1848, p. 172 (Caracas);

Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 132.

Psittacula guianensis, Souancé, Rev. et Mag. de Zool. 1856, p. 156; Bp. Naumannia, 1856, Consp. Psitt. n. 131; Souancé, Icon. Perr. pl. xxxix. (δ ♀) (1857); Sclat. & Salv. P. Z. S. 1868, p. 169; Ridgw. Pr. U.S. Nat. Mus. x. p. 543 (1857); id. Auk, 1888,

p. 462; Hartl. Journ. f. Orn. 1889, p. 113.

Psittacula cyanoptera, G. R. Gr. List Psitt. Brit. Mus. p. 86 (1859); Sclat. Cat. Am. B. p. 357, n. 2135 (1860); Tayl. Ibis, 1864, p. 94; Finsch, P. Z. S. 1870, p. 554; G. R. Gr. Hand-list, ii. p. 166, n. 8350 (1870); F. Wyatt, Ibis, 1871, p. 382 (Colombia); Sclat. & Salv. Nomencl. Av. Neotr. p. 115, n. 2 (1873); Salv. & Godm. Ibis, 1880, p. 176; Rehnw. Journ. f. Orn. 1881, p. 349 (syn. emend.) (Consp. Psitt. p. 189); Salv. Cut. B. Strickl. Coll. p 463 (1882); Rchnw. Vogelbild. Nachtr. 106 (1883).

Psittaculus sancti thomæ, part., Schleg. Mus. p. 31, n. 1, 2 (Forte de Rio Brancho), p. 32, n. 4 (1864).

Psittacula cyanochlora, Natt. Cat. MS.; Schleg. Mus. P.-B. Psittaci, p. 31 (in syn. Psitt. sancti thomæ) (1864); Finsch, Papag. ii. p. 649 (in syn. P. passerinæ) (1868); Hartl. P. Z. S. 1885, p. 615, pl. xxxviii. f. 2 (Rio Brancho); id. Ibis, 1888, p. 493; Ridgw. Auk, v. pp. 461, 462 (1888).

Psittacula passerina, part., Finsch, Papag. ii. p. 649 (mas jun. et in

trans.) (1868).

Psittacula st. thomæ, part., Sousa, Mus. Nac. Lisb. Psittaci, p. 14 (?) (1869); G. R. Gr. Hand-list, ii. p. 166, n. 8357 (1870).

Psittaculus passerinus, part., Schleg. Mus. P.-B. Psittaci, Revue,

p. 8 (1874).

Psittacula deliciosa, Ridgw. Pr. U.S. Nat. Mus. x. p. 529 (1887); Hartl. Ibis, 1888, p. 493 (=cyanochlora, Natt.); Ridgw. Auk, v. pp. 461, 462 (1888).

Adult male. Green; hind neck duller and tinged with greyish; forehead, sides of the head, lower back, and rump emerald-green; lower back and rump in some specimens shaded with blue; upper tail-coverts and lower parts yellowish green; greater upper wing-coverts green, with the tips and outer edges emerald-green, the foremost ones, in very old birds (?), tinged with light cobalt-blue; primary-coverts green, the innermost deep blue; quills green, with lighter edges on the outer webs, and with the inner webs underneath greenish; metacarpal edge bluish green; under wing-coverts deep blue, some tipped or edged with bluish green; axillars bluish green, tipped with deep blue; tail green, with the inner webs of the feathers yellow: bill whitish: feet flesh-colour; "irides brown" (A. A. Simons). Total length about 5.5 inches, wing 3.1-3.3, tail 1.5, bill 0.53, tarsus 0.45.

Adult female. Green: rump brighter; forehead, sides of the head, and lower parts yellowish green; inner webs of the quills

underneath greenish.

Hab. Guiana (?), Venezuela, Trinidad Island, Colombia, and Amazons Valley from Rio Brancho to Diamantina Creek and

Santarem.

The series of specimens examined, including the type of Psitta-cula cyanochlora, Natt.\*, shows a great amount of individual variation, probably according to age. In one specimen from Colombia the rump is shaded with blue. The foremost greater upper wing-coverts, which are generally green, show in some specimens, and particularly in one old male from Villadupar, a fine cobalt-blue tinge; the deep blue colour on the under wing-coverts, which in the type of P. cyanochlora leaves only the feathers on the margin of the wing green or bluish green, is similarly diffused in the specimen from Villadupar, already mentioned, while in the majority of the specimens it is confined to the innermost under wing-coverts.

I have not seen specimens from Guiana, which require com-

parison.

a, b. d ad. sk.	Villadupar, U.S.C., June (Simons).	Salvin-Godman Coll.
c, d. ♂♀ad. sk. e, f. Ad. sk.	Valencia, U.S.C., May (Simons). Venezuela.	Salvin-Godman Coll. Mr. Dyson [C.]. Salvin-Godman Coll.
g. d ad. sk.	Curupano, Venezuela, Dec. (Goering).	
h. Ad. sk.	Venezuela.	Sclater Coll.
i, k, l. Ad. sk.	Trinidad.	Purchased.
m, n. Ad. sk.	Trinidad.	Sclater Coll.
o. Ad. sk. p-s. ♂♀ad. sk.	Trinidad.	Purchased.

<sup>\*</sup> I have to thank Dr. Schauinsland, Director of the Museum of Bremen, for the loan of this valuable specimen.

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### BROTOGERYS. Type. Brotogeris, Vig. Zool. Journ. ii. p. 400 (1825) .... B. pyrrhopterus. Brotogerys, Agass. Nomencl. Zool. Ind. Univ. p. 54 (1846).Tirica, Bp. Rev. et Mag. de Zool. 1854, p. 151 .... B. tirica. Psittovius, Bp. Rev. et Mag. de Zool. 1854, p. 151... B. jugularis. Torpus, part., Boie, 1858 (G. R. Gr. Hand-list, ii. p. 150, 1870). Sittace, G. R. Gr. Hand-list, ii. p. 150 (1870) .... B. tuipara. Range. From Central America to Brazil, Peru, and Bolivia. Key to the Species. a. Tail longer, as long as the wings, or nearly so; no distinct spot on the chin. a'. No yellow patch on the wing; the greater wing-coverts green ...... tirica, p. 254. b'. A yellow patch on the wing, the greater upper wing-coverts being yellow. . . . . . . . . . . *chiriri*, p. 255. daries brighter yellow ..... virescens, p. 257. b. Tail shorter, about two-thirds of the wings. c'. No yellow patch on the sinciput; bill rather long. c". Cheeks light grey; pileum bluish, contrasting with the rest of the upper trasting with the less bright orange; parts; under wing-coverts bright orange; pyrrhopterus, p. 258. d". Cheeks green; an orange or brown spot on the chin. a". Primary-coverts blue. a<sup>4</sup>. Upper wing-coverts tinged with brown; under wing-coverts yellow. v jugularis, p. 259. b4. Upper wing-coverts green, with no brown tinge. a<sup>5</sup>. Bend of the wing and carpal edge green..... devillei, p. 261. b<sup>5</sup>. Bend of the wing and carpal edge yellow ..... gustavi, p. 262. b"". Primary-coverts orange or yellow. $c^4$ . Primary-coverts orange. d<sup>1</sup>. Primary-coverts yellow ..... chrysosema, p. 265. d'. A yellow patch on the sinciput; no distinct spot on the chin; bill rather short .. v tui \*, p. 265.

#### Brotogerys ferrugineifrons, Lawr.

Brotogerys ferrugineifrons, Lawr. Ibis, 1880, p. 238; Salv. & Sclat. ibid.;

<sup>\*</sup> As I am acquainted with the following species only from the description, I have not been able to include it in the key:—

## 1. Brotogerys tirica.

Tui tirica, tertia species, Marcgr. Hist. Bras. libr. ix. p. 206 (1648).

Psittacula brasiliensis, Briss. Orn. iv. p. 382 (1760). Le Tirica, Buff. Hist. Nat. Ois. vi. p. 281 (1779).

Green Parrakeet, Lath. Gen. Syn. i. p. 320 (1781); id. Gen. Hist. ii. p. 276 (1822).

Psittacus tiriacula, part., Bodd. Tabl. Pl. Enl. p. 51 (1783).

Psittacus tirica, Gm. S. N. i. p. 351, n. 137 (syn. emend.) (1788); (?) Lath. Ind. Orn. i. p. 134, n. 158 (1790); (?) Shaw, Gen. Zool. viii. 2, p. 552 (1811); Bechst. Kurze Ueb. p. 86 (1811–12); Vieill. N. D. xxv. p. 381 (1877); id. Enc. Méth. iii. p. 1411 (1823). ? Psittacus rufirostris, Licht. Abh. Berl. Ak. 1816–17, p. 167.

Psittacus viridissimus, Temm. et Kuhl, MS.; Kuhl, Consp. Psitt. p. 25 (1820); Neuwied, Beitr. iv. p. 198 (1832); Hahn, Orn. Atl. p. 29, t. 15 (1834).

? Prasine Parrot, Lath. Gen. Hist. ii. p. 187 (1822).

Aratinga acutirostris, Spix, Av. Bras. i. p. 32, t. xv. f. 1 (1824); Steph. Gen. Zool. xiv. p. 136 (1826); Brehm, Mon. d. Papag. t. 22. ? Aratinga viridissimus, Steph. Gen. Zool. xiv. p. 136 (1826).

Sittace tirica, Wagl. Mon. Psitt. p. 637 (1832); Hartl. Syst. Verz.

Ges. Mus. p. 85 (1844).

Conurus tiriacula, G. R. Gr. (nec Bodd.) Gen. B. ii. p. 414, n. 27 (syn. emend.) (1845); Cab. in Schomb. Guian. iii. p. 727 (1848); G. R. Gr. List Psitt. Brit. Mus. p. 45 (syn. emend.) (1859); Sclat. Cat. Am. B. p. 351, n. 2094 (syn. emend.) (1862); Schleg. Mus. P.-B. Psittaci, p. 14 (1864); id. op. cit. Rerué, p. 4 (1874); Rehnw. Vogelbild. t. xvii. f. 6 (1878–83).

Conurus viridissimus, Licht. Nomencl. Av. p. 72 (1854); Burm. Syst.

*Ueb.* iii. p. 172 (1856).

Conurus rufirostris, Licht. (nec Gm.) Nomencl. Av. p. 72 (1854). Tirica rufirostris, Bp. (nec Gm.) Rev. et Mag. de Zool. 1854, p. 151, n. 68; Sousa, Mus. Nac. Lisboa, Psittaci, p. 10 (1869).

Tirica brasiliensis, Souancé, Rev. et Mag. de Zool. 1856, p. 64.

Tirica viridissima, Bp. Naumannia, 1856, Consp. Psitt. n. 57 (syn. emend.).

Brotogerys tirica, Finsch, Papag. ii. p. 89 (1868); Petz. Orn. Bras, pp. 250, 447, liii (1871); Gieb. Thes. Orn. i. p. 482 (1872); Sund. Meth. nat. Av. disp. Tent. p. 70 (1872); Meyer, Abb. v. Vogel-Skel. t. iii. (1879).

Tirica tiriacula, G. R. Gr. Hand-list, ii. p. 150, n. 8155 (syn. emend.)

(1870).

Brotogerys tiriacula, Hamilt. Ibis, 1871, p. 308; Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 1 (1873); Garrod, P. Z. S.

Rehnw. u. Schal. Journ. f. Orn. 1880, p. 209; Rehnw. Journ. f. Orn. 1881, p. 343 (Consp. Psitt. p. 183); id. Vogelbild. Nachtr. 99 (1883).

<sup>&</sup>quot;Front marked narrowly with bright ferruginous; the chin and the feathers adjoining the sides of the bill are of a dull light ochreous-red; upper plumage of a dark glossy green, brighter on the upper tail-coverts; tail-feathers of a rather lighter green than the back, with reddish-brown shafts; outer webs of quills green, the inner black; under wing-coverts dark green; inner edges of quills of a dull light bluish green; under plumage light green, with a yellowish tinge, and on the throat a wash of ochreous; bill dark horn-colour (?); feet yellowish brown. Length 8 inches, wing 4.75, tail 3.5. "Hab. New Granada, Bogota." (Lawrence.)

1873, pp. 466, 534, 1874, p. 587; Cab. Journ. f. Orn. 1874, p. 228; Berl. Journ. f. Orn. 1874, p. 283; Salv. Cat. B. Strickl. Coll. p. 469 (1882); Sclat. List Vert. An. 8th ed. p. 352 (1883); Salv. *Ibis*, 1886, p. 68.

Brotegerys viridissima, Rchnw. Journ. f. Orn. 1881, p. 341 (Consp.

Psitt. p. 181).

Adult. Green; forehead, sides of the head, and underparts lighter yellowish green; primary-coverts and primaries blue, with narrow green edges on the outer webs; a slight olive-brown tinge on the smaller upper wing-coverts; smaller under wing-coverts greenish yellow, greater under wing-coverts and basal half of the inner webs of the quills below bluish green; tail above green, the two central feathers slightly tinged with blue, the remainder with narrow vellow edges on the inner webs: "bill reddish flesh-colour; cere whitish; feet brownish flesh-colour; iris brown-grey" (Max.). Total length 10 inches, wing 5, tail 5, bill 0.7, tarsus 0.5.

Female. Like the male.

Young. More greyish green; quills green, with no blue colour. (Burmeister).

Hab. Eastern Brazil, and also (according to Schomburgk) British Guiana. I have never seen a specimen from the latter country.

a, b. Ad. st.	Brazil.	Purchased.
c, d. Ad. sk.		Purchased.
e. Ad. sk.	Brazil.	Sclater Coll.
f. Ad. sk.	Bahia, Brazil (Wucherer).	Salvin-Godman Coll.
g. Ad. sk.	Santa Fé, Minas (Rogers).	Sclater Coll.
h. Ad. sk.	Rio, Brazil.	Sclater Coll.
i. ♀ ad. sk.	Rio Claro, Prov. Goyaz,	Salvin-Godman Coll.
	Brazil (Joyner).	
k. $Q$ ad, sk.	Pelotas, Rio Grande do	Salvin-Godman Coll.
	Sul, Brazil (Joyner).	

#### l. Skeleton.

# 2. Brotogerys chiriri.

Maracana ala amarilla, Azara, Apunt. Hist. Nat. Parag. i. p. 434, no. 283 (1803).

Maracana aux ailes jaunes, Azara, Voy. (ed. Sonn.) iii. p. 68 (1809). Psittaeus chiriri, Vieill. N. D. xxv. p. 359 (1817); id. Enc. Meth. iii. p. 1394 (1823).

Aratinga xanthopterus, Spix, Av. Bras. i. p. 31, t. xv. f. 2 (1824); Steph. Gen. Zool. xiv. p. 135 (1826); Brehm, Mon. d. Papag.

? Psittaculus xanthopterygius, Spix, Av. Bras. i. p. 38, t. xxxiv. f. 1 (nec fig. 2) (nestling) (1824); Voigt, Cuv. Uebers. p. 748 (1831); Brehm, Mon. d. Papag. t. 33.

? Psittacula xanthopterygia, Steph. Gen. Zool. xiv. p. 146 (1826); G. R. Gr. List Psitt. Brit. Mus. p. 87 (1859).

Sittace xanthoptera, Wagl. Mon. Psitt. p. 635 (1832).
Psittacus virescens, Hahn (nec Gm.), Orn. Atl., Papag. t. 50 (nec text, p. 70) (1836).

Psittacara xanthoptera, Bourj. Perr. pl. 23 (1837-38).

 Conurus xanthopterigius, Bourj. Perr. pl. 47. f. 1 (male) (1837–38).
 Conurus xanthopterus, G. R. Gr. Gen. B. ii. p. 414, n. 29 (1845);
 Burm. Syst. Ueb. ii. p. 174 (1856); G. R. Gr. List Psitt. Brit. Mus. p. 45 (1859); Sclat. Cat. Am. B. p. 351, n. 2096 (1862); Pelz. Verh. z.-b. Ges. Wien, 1865, p. 923 (var.); Sclat. & Salv. P. Z. S. 1866, p. 197.

Conurus virescens, Hartl. (nec Gm.) Hartl. Ind. Azar. Apunt. p. 18

(1847).

Tirica xanthoptera, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 70; Souancé, Rev. et Mag. de Zool. 1856, p. 64; Bp. Naumannia, 1856, Consp. Psitt. n. 56; G. R. Gr. Hand-list, ii. p. 150, n. 8157

Brotogerys xanthopterus, Sclat. & Salv. P. Z. S. 1867, p. 979, 1873,

p. 300; Sclat. List Vert. An. 8th ed. p. 353 (1883);
Brotogerys xanthoptera, Finsch, Papag. ii. pp. 92, 949 (1868);
Pelz. Orn. Bras. pp. 260, 447, liii (1871); Sclat. & Salv. Nomenel.
Av. Neotrop. p. 113, n. 2 (1873); Rehnw. Vogelbild. t. xxviii. Nat. Hist. i. p. 104 (1889).

Brotogerys chiriri, Berl. Journ. f. Orn. 1887, p. 26.

Adult male. Green, lighter on the underparts; bastard-wing and outermost greater wing-coverts yellow; primary-coverts deep blue; quills green; smaller under wing-coverts green; greater under wing-coverts and inner webs of the primaries below verditer-blue; tail green, with a bluish tinge below in some lights: bill pale hornflesh-colour; feet flesh-colour. Total length 9.5 inches, wing 4.9, tail 4.5, bill 0.7, tarsus 0.45.

Female. Like the male.

Young. The green colour duller, as is also the yellow patch on the greater wing-coverts (Finsch).

Hab. South-eastern Brazil, Matto Grosso, Bolivia, Upper Amazons,

and Eastern Peru.

Specimens from Matto Grosso are decidedly smaller than those from Bahia and Bolivia.

Brazil. a. Ad. sk. b, c. Ad. sk. Bahia (Wucherer). d. Ad. st. Bolivia. e. Ad. sk. Bolivia (Bridges). f. of ad. sk. Cuyaba, Matto Grosso, Brazil, Dec. (H. H. Smith). Corumbo, Matto Grosso,  $g, h. \not \subseteq ad. sk.$ Brazil, Mar. (H. H. Smith). Chapada, Matto Grosso,  $i, k. \ d$  ad. et  $\mathcal{P}$ Brazil, May(H, H, Smith). imm. sk. Cachoeira, Matto Grosso, l. 3 imm. sk. Brazil, Feb. (H.H. Smith).

Sclater Coll. Salvin-Godman Coll. T. Bridges [C.]. Sclater Coll. Salvin-Godman Coll.

Salvin-Godman Coll.

Salvin-Godman Coll.

Salvin-Godman Coll.

## 3. Brotogerys virescens.

Psittaca cayanensis, Briss. Orn. iv. p. 334, pl. xxvii. f. 2 (1760).

Petite Perruche verte de Cayenne, Daubent. Pl. Enl. 359.

Psittacus versicolurus (!), Müll. S. N. Suppl. p. 75, 6 i (1776); Cass. Pr. Ac. Philad. 1864, p. 239. Perriche à ailes variées, Buff. Hist. Nat. Ois. vi. p. 259 (1779).

Yellow-winged Parrakeet, Lath. Syn. i. p. 244, n. 43 (1781); id.

Gen. Hist. ii. p. 167 (1822).

Psittacus virescens, Gm. S. N. i. p. 326, n. 77 (1788); Lath. Ind. Orn. i. p. 100, n. 51 (1790); Shaw, Gen. Zool. viii. 2, p. 458 (1811); Bechst. Kurze Ueb. p. 59 (1811-12); Vieill. N. D. xxv. p. 360 (1812); Kuhl, Consp. Psitt. p. 26 (syn. emend.) (1820); Vieill. Enc. Méth. iii. p. 1395 (1823); Voigt, Cuv. Uebers. p. 733 (1831): Hahn, Orn. Atl., Papag. p. 70 (nec t. 50) (1836).

Perruche à ailes variées, Levaill. Perr. pl. 57 (1801). Aratinga virescens, Spix, Av. Bras. i. p. 37 (1824); Steph. Gen. Zool. xiv. p. 139 (1826); Brehm, Mon. d. Papay. t. 31 (1852). Conurus virescens, Less. Tr. d'Orn. p. 212 (1831); G. R. Gr. Gen.

B. ii. p. 414, n. 28 (1845); Burm. Syst. Ueb. ii. p. 173 (1856); G. R. Gr. List Psitt. Brit. Mus. p. 45 (1859); Sclat. Cat. Am. B. p. 351, n. 2095 (1862).

Sittace virescens, Wagl. Mon. Psitt. p. 636 (1832).

Tirica virescens, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 69; Souancé, Rev. et Mag. de Zool. 1856, p. 64; Bp. Naumannia, 1856, Consp. Psitt. n. 58; Sousa, Mus. Nuc. Lisboa, Psittaci, p. 10

Psittaculus virescens, Schleg. Mus. P.-B. Psittaci, p. 27 (1864); id.

op. cit. Revue, p. 7 (1874).

Brotogerys virescens, Sclat. & Salv P. Z. S. 1867, p. 588; Finsch, Papag. ii. pp. 94, 949 (1868); Pelz. Orn. Bras. pp. 260, 447, liii (1871); Gieb. Thes. Orn. i. p. 483 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 3 (1873); Petz. Ibis, 1873, p. 117; Garrod, P. Z. S. 1873, pp. 466, 634, 1874, p. 387; Rehnw. Journ. f. Orn. 1881, p. 342 (Consp. Psitt. p. 182); id. Vogelbild. Nachtr. 98 (1883); Sclut. List Vert. An. 8th ed. p. 353 (1883); Tacz. Orn. Pér. iii. p. 206, Tabl. p. 99 (1886).

Tirica versicolurus, G. R. Gr. Hand-list, ii. p. 150, n. 8156 (1870).

Adult male. Dark green; forehead, lores, and upper parts of the cheeks with a bluish grey tinge; primary-coverts blue, first primary black, tipped and edged with blue on the outer web; next three primaries dull blue, edged with green on the outer webs; the remaining primaries and the bastard-wing white; secondaries white tinged with yellow; greater wing-coverts yellow; smaller under wing-coverts green, the greater ones and the inner webs of the first four primaries below bluish green: "tail above green, below bluish green; bill, cere, and feet pale horn-yellowish; iris brown "(Finsch). Total length 8.8 inches, wing 4.8, tail 4.2, bill 0.6, tarsus 0.5.

Female. Like the male.

Young. The white primaries are less in number and have green tips; the yellow greater wing-coverts are edged with green.

Hab. The Amazon Valley from Para to the Peruvian Andes. Schlegel states that the specimens in the Leyden Museum are VOL. XX.

from Guiana, but no recent collector has found this species in that country.

a, b. Ad. sk. Para. R.Graham, Esq. [P.]. Para (Wallace). Salvin-Godman Coll. c. Ad. sk. d. Ad. sk. Mexiana, Lower Amazons, Sclater Coll. Nov. (Wallace). Yquitos, Upper Amazons Sclater Coll. e, f. Ad. sk. (H. Whitely). Yquitos, Upper Amazons, Salvin-Godman Coll.  $g, h, i. \not \subseteq ad.$ April, Aug., & Sept. (H. et & imm. sk. Whitely). k.  $\Omega$  imm. sk. Pebas, E. Peru, April Salvin-Godman Coll.

(Haurwell). l. Skeleton. S. America.

## 4. Brotogerys pyrrhopterus.

Orange-winged Parrakeet, Lath. Syn. Suppl. ii. p. 90, n. 16 (1802);

id. Gen. Hist. ii. p. 193 (1822).

Psittacus pyrrhopterus, *Lath. Ind. Orn. Suppl.* ii. p. xxii (1892); *Shaw, Gen. Zool.* viii. 2, p. 470 (1811); *Vieill. N. D.* xxv. p. 360 (1817); *Kuhl, Consp. Psitt.* p. 94 (1820); *Vieill. Enc. Méth.* iii. p. 1395 (1823); *Vig. Zool. Journ.* i. p. 535, pl. iv. *Suppl.* (1825); *G. R. Gr. List B. Trop. Isl.* p. 31 (1859).

Brotogeris pyrthopterus, *Via Zool. Journ.* ii. p. 400 (1825); *Stark.* 

Brotogeris pyrrhopterus, Vig. Zool. Journ. ii. p. 400 (1825); Steph. Gen. Zool, xiv. p. 133 (1826); Less. Man. d'Orn. ii. p. 148 (1828); Sw. Class. B. ii. p. 303 (1837); Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 75; Souancé, Rev. et Mag. de Zool. 1856, p. 152; Bp. Naumannia, 1856, Consp. Psitt. n. 59.

Conurus griseocephalus, Less. Tr. d'Orn. p. 214 (1831); Pucher. Rev. et Mag. de Zool. 1853, p. 159; Hartl. Journ. f. Orn. 1855, p. 422. \*\*Et May. the Zoot. 1835, p. 183; Harti, John. J. Gra. 1832; Selby, Nat. Libr., Parr. p. 159, pl. xxii. (1836); G. R. Gr. Gen. B. ii. p. 411, n. 10 (1846); Hartl. Wiegm. Arch. 1852, i. p. 133. Psittacula griseifrons, Bourj. Perr. pl. 86 (1837–38). Conurus pyrrhopterus, G. R. Gr. List Psitt. Brit. Mus. p. 46 (1859). Brotogerys pyrrhopterus, Sclat. P. Z. S. 1860, p. 287; ii. p. 150, p. 215.

B. p. 351, n. 2097 (1862); G. R. Gr. Hand-list, ii. p. 150, n. 8154 (1870); Garrod, P. Z. S. 1874, p. 587; Sclat. List Vert. An. 8th ed. p. 353 (1883).

Erotogerys pyrrhoptera, Finsch, Papag, ii. p. 95 (1868); Gieb.
Thes. Orn. i. p. 482 (1872); Sclat. & Salv. Nomencl. Av. Neotrop.
p. 113, n. 4 (1873); Tacz. P. Z. S. 1877, pp. 329, 333; Pelz.
Verh. z.-b. Ges. Wien, 1878, p. 16; Rehnw. Journ. f. Orn. 1881,
p. 342 (Consp. Psitt. p. 182); id. Vogelbild. Nachtr. 97 (1883);
Berl. & Tacz. P. Zs. 1883, p. 573, 1885, p. 109; Tacz. Orn. Pér.
iii, p. 205 Tabl. p. 99 (1886). iii. p. 205, Tabl. p. 99 (1886).

Adult. Green, lighter yellowish green on the underparts; pileum bluish green, greyish on the forehead; sides of the head and chin grey; upper wing-coverts with a slight brown tinge; primarycoverts blue; quills green, with a slight bluish tinge on the primaries; smaller under wing-coverts orange; greater under wingcoverts and inner webs of the quills below verditer-green; tail green, the inner webs of the feathers with narrow yellow edges:

"bill, feet, and cere pale flesh-colour; iris brown" (Finsch). Total length about 8 inches, wing 4.8, tail 3.3, bill 0.7, tarsus 0.42. Female. Like the male.

Hab. Western Ecuador and North-western Peru.

a, b. Ad. st. Guavaguil. Zoological Soc. Coll. c. Ad. sk. Guayaquil, July (Capt. Zoological Soc. Coll. Belcher). Babahoyo, Ecuador (Frad. Ad. sk. Sclater Coll. ser). e, f. Ad. sk. Santa Rita, Ecuador Salvin-Godman Coll. (Buckley).g. Skeleton. Guayaquil.

### Brotogerys jugularis.

Psittacula gutture luteo, Briss. Orn. iv. p. 396, t. xxx. f. 3 (1760). Petite Perruche à gorge jaune d'Amérique, Daubent. Pl. Enl. 190.

Petite Perruche, appelée petite jaseuse, Daubent. Pl. Enl. 837. Psittacus jugularis, Müll. S. N. Suppl. p. 80, n. 65 (1776) (ex Pl. Enl. 190, f. 1); Cass. Pr. Ac. Philad. 1864, p. 240.

Le Toui à gorge jaune, Buff. Hist. Nat. Ois. vi. p. 280 (1779).

Tirica, part., Buff. Hist. Nat. Ois. vi. p. 281 (1879).

Yellow-throated Parrakeet, Lath. Syn. i. p. 319, n. 128 (1781); id. Gen. Hist. ii. p. 275 (1822). Psittacus flavigula, Bodd. Tabl. Pl. Enl. p. 12 (1783) (ex. Pl. Enl.

190. f. 1).

Psittacus tiriacula, Bodd. Tabl. Pl. Enl. p. 51 (syn. emend.) (1783) (ex Pl. Enl. 837).

Psittacus tovi, Gm. S. N. i. p. 351, n. 136 (1788); Bechst. Kurze

*Ueb.* p. 86 (1811–12).

Psittacus toui, Lath. Ind. Orn. i. p. 134, n. 157 (1790); ? Shaw, Gen. Zool. viii. 2, p. 546 (1811); Vieill. N. D. xxv. p. 379 (1817); id. Enc. Méth. iii. p. 1416 (1823).

Psittacus tirica, Kuhl (nec Gm.), Consp. Psitt. p. 95 (1820) (ex Pl. Enl.~837).

Psittacula tovi, Wagl. Mon. Psitt. p. 624 (1832).

Conurus tovi gutture luteo, Bourj. Perr. pl. 48 (1837-38). Psittacus (Caïca) chrysopogon, Less. Rev. Zool. 1842, p. 135.

Caica chrysopogon, Less. Descr. Mamm. et Ois. p. 197 (1847). Psittovius tovi, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 71; Sclat. P. Z. S. 1855, p. 162; Souancé, Rev. et Mag. de Zool, 1856, p. 64; Bp. Naumannia, 1850, Consp. Psitt. n. 73; Sclat. 1958, p. 1860, p. 44; Tayl. Ibis, 1863, p. 121; Lacr. Ann. Lyc. N. Y. vii. p. 299 (1862); Sousa, Mus. Nac. Lisb. Psittaci, p. 10 (1869). Psittovius chrysopogon, Bp. Rev. et Mag. de Zool. 1854, p. 151,

n. 74.

Conurus tovi, G. R. Gr. List Psitt. Brit. Mus. p. 47 (1859); Cass. Pr. Ac. Philad. 1860, p. 137.

Brotogerys tovi, Sclat. Cat. Am. B. p. 352, n. 2101 (1862); id. P. Z. S. 1864, p. 367; Finsch, Papag. ii. p. 99 (1867); Lawr. Ann. Lyc. N. Y. ix. p. 131 (1868); Frantz. Journ. f. Orn. 1869, p. 364; Salv. P. Z. S. 1870, p. 214; id. Ibis, 1871, pp. 87, 93; Wyatt, Ibis, 1871, p. 381; Gieb. Thes. Orn. i. p. 482 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 5 (1873); Garrod,

P. Z. S. 1873, p. 634, 1874, p. 587; Lawr. Bull. U.S. Nat. Mus. n. 4, p. 36 (1875); Boucard, P. Z. S. 1878, p. 46; Sclat. & Salv. P. Z. S. 1879, p. 538; Salv. Cat. B. Strickl. Coll. p. 470 (1882); Nutting, Pr. U.S. Nat. Mus. v. p. 402 (Costa Rica) (1882), vi. pp. 377, 395 (Nicaragua) (1883); Sclat. List Vert. An. 8th ed. p. 353 (1883); Berl. Journ. f. Orn. 1884, p. 316; Zeled. Pr. U.S. Nat. Mus. viii. p. 111 (Costa Rica) (1886); Ridgw. Man. N. Am. Birds, p. 268 (note) (1887).

Psittovius subceruleus, Lawr. Ann. Lyc. N. Y. vii. p. 475 (1862); Sclat. P. Z. S. 1864, p. 367.

Psittaculus tovi, Schley. Mus. P.-B. Psittaci, p. 29 (1864); id. op. cit. Revue, p. 7 (1874).

Brotogerys tovi, var., Sclat. P. Z. S. 1864, p. 367.

Brotogerys subcerulea, Finsch, Papay. ii. p. 97, t. 2 (1868); Salv. Ibis, 1871, p. 94 (note).

Sittace jugularis, G. R. Gr. Hand-list, ii. p. 150, n. 8160 (1870).

Sittace subcærulea, G. R. Gr. l. c. p. 151, n. 8163 (1870).

Brotogerys chrysopogon, Rehnw. Vogelbild. t. xxviii. f. 5 (1878-83); id. Journ. f. Orn. 1881, p. 343 (Consp. Psitt. p. 183).

Brotogerys chrysopogon, var., Rehnw. Journ. f. Orn. 1881, p. 343 (Consp. Psitt. p. 183).

Adult male. Green; underneath yellowish green, with a bluish tinge (more or less distinct) on the abdomen; head, scapulars, lower back, and rump more or less with a bluish tinge; interscapular region green with an olive tinge; an orange spot on the chin; smaller upper wing-coverts olive-brown; the greater ones and quills bluish green; primary-coverts deep blue; smaller under wing-coverts yellow, the greater ones and inner webs of the quills below bluish green; tail green, the two central feathers more or less with a bluish tinge: bill pale horn flesh-colour; feet yellowish flesh-colour; iris brown. Total length about 7.8 inches, wing 4.2, tail 3, bill 0.7, tarsus 0.42.

Female. Like the male.

Hab. Southern Mexico, Central America, and Colombia.

I have never seen specimens from Brazil, where the present species has been stated to be found. According to Sclater and Salvin the type of *Psittovius subcæruleus*, which was shot in Panama by Mr. M'Leannan out of a flock of *B. jugularis*, is only an individual variety, with a bluish tinge, of the last-named species.

• /	<u> </u>	•
a, b. Ad. st.	S. America.	Purchased.
c. & ad. st.	S. America.	Zoological Soc. Coll.
d. Ad. sk.	G . 1 . (0.310)	Purchased.
e. Ad. sk.	Guatemala (Sallé).	
f. Ad. sk.	La Concepcion, Pacific side of Guatemala, Jan.	Salvin-Godman Coll.
g. Ad. sk.	Chiapam, Pacific side of Guatemala.	Salvin-Godman Coll.
h, i, k.	Retalhuleu, Guatemala, July (W.B. Richardson).	Salvin-Godman Coll.
l, m. Ad. sk.	Bebedero, Nicoya, Costa Rica, March (Arcé).	Salvin-Godman Coll.
n. ♂ ad. sk.	Mina de Chorcha, Chiriqui ( <i>Arcé</i> ).	Salvin-Godman Coll.
o. 3 ad. sk.	Bugaba, Chiriqui (Arcé).	Salvin-Godman Coll.

Calobre, Veragua (Arcé). p. Ad. sk. q. Ad. sk. Southern slope of the Volcano of Chiriqui (Arcé). r. Ad. sk. Panama. s. Ad. sk. Panama. t. 3 ad. sk. Panama, Jan. (Hicks). Paraiso Station, Isthmus of Panama (A. Hughes). u. Ad. sk. Panama (M'Leannan).  $v, w. \ \exists \ \ \ \text{ad. sk.}$ Panama (M'Leannan). *x*. Ad. sk. y. Ad. sk. Cartagena, Colombia. Santa Marta, U.S. Colomz. ♀ ad. sk. bia, December (Simons). a'. Q ad. sk. Medellin. b'. of ad. sk. Remedios, U.S. Colombia

c'. Ad. sk.

Salvin-Godman Coll. Salvin-Godman Coll.

G. Barclay, Esq. [P.]. Salvin-Godman Coll. Salvin-Godman Coll. Salvin-Godman Coll.

Salvin-Godman Coll. Sclater Coll. Sclater Coll. Salvin-Godman Coll.

Purchased. Salvin-Godman Coll.

Sclater Coll.

## 6. Brotogerys devillei.

Perruche à tache souci femelle, Levaill. Perr. pl. 59 (1801).

(Salmon).

Bogota.

Psittacus sosove femina, Kuhl, Consp. Psitt. p. 27 (1820). Sittace tuipara, part., Wagl. Mon. Psitt. p. 633 (1832). Conurus jugularis, Deville (nec Mill.), Rev. et Mag. de Zool. 1851, p. 209; O. Des Murs in Casteln. Exp. Am. du Sud, Ois. p. 15, t. iii. f. 2 (1855); Hartl. Journ. f. Orn. 1857, p. 42; Sclat. P. Z. S.

1858, p. 76; G. R. Gr. List Psitt. Brit. Mus. p. 46 (1859).
Psittovius jugularis, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 73;
Soumcé, Rev. et Mag. de Zool. 1856, p. 152; Bp. Naumannia,
1856, Consp. Psitt. n. 73; Sclat. Ibis, 1860, p. 44.
Brotogerys jugularis, Sclat. Cat. Am. B. p. 352, n. 2100 (1862);
Sclat. & Salv. P. Z. S. 1866, p. 197, 1867, p. 753; Finsch,
Papag. ii. p. 101 (1868); Pelz. Orn. Bras. pp. 260, 447, liii (1871);
Gigh. Thes. Orn. i. p. 482 (1872); Sclat. & Salv. Vonencel Av. Gieb. Thes. Orn. i. p. 482 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 6 (1873); iid. P. Z. S. 1873, p. 300; Rehnw. Journ. f. Orn. 1881, p. 343 (Consp. Psitt. p. 183); Tacz. P. Z. S. 1882, p. 46; Rehnw. Vogelbild. Nachtr. 100 (1883); Tacz. & Berl. P. Z. S. 1885, p. 109; Tacz. Orn. Pér. iii. p. 208, Tabl. p. 99 (1886); Berl. Ibis, 1889, p. 181; Garl. Journ. f. Orn. 1889, p. 291; Berl. Journ. f. Orn. 1889, p. 316.

Psittaculus jugularis, Schleg. Mus. P.-B. Psittaci, p. 29 (1864); id. op. cit. Revue, p. 7 (1874).

Sittace devillei, G. R. Gr. Hand-list, ii. p. 150, n. 8159 (1870). Sittace cyanoptera, Natt. Cat. MS., fide Pelz. Orn. Bras. p. 260 (1871).

Adult male. Green; forehead tinged with yellowish, pileum with bluish; back, rump, scapulars, and wing-coverts with an olive tinge; green underparts lighter than the upper parts; chin bright orange; bastard-wing, primary-coverts, and quills deep blue, edged with green on the outer edges; smaller under wing-coverts green, the greater ones and inner webs of the quills verditer-blue; central tailfeathers blue edged with green; the next pair of tail-feathers green tinged with blue on the outer webs; the remainder green, with the inner webs yellowish green; tail underneath yellow-green: bill

pale horn flesh-colour; feet yellowish flesh-colour; iris brown. Total length 7.5 inches, wing 4.8, tail 2.8, bill 0.75, tarsus 0.5.

Female. Like the male.

Hab. Upper Rio Negro and Upper Amazons.

a. ♀ ad. sk.	Rio Vaupé, Brazil (Nat- terer).	Salvin-Godman Coll.
b. Ad. sk.	Ecuador.	Sclater Coll.
c, d. Ad. sk.	Sarayacu, Ecuador (Buck-ley).	Salvin-Godman Coll.
e. Ad. sk.	Sarayacu, Ecuador, April (Buckley).	Sclater Coll.
f. Ad. sk.	River Amazons.	H. W. Bates [C.]. (Type of species.)
g, h. Ad. sk.	Yquitos, Upper Amazons, June, Aug. (H. Whitely).	Salvin-Godman Coll.
i. d ad. sk.	Yurimaguas, Peru, April (Stolzmann).	Sclater Coll.
k, l.	Yurimaguas, Peru, Feb., March.	Purchased.
$m, n. \mathcal{J}$ ad. sk.	Nauta, E. Peru, May, Oct. (Hauxwell).	Salvin-Godman Coll.
o. ♀ ad. sk.	Nauta, E. Peru, April.	E. Bartlett [C.].
p. $Q$ ad. sk.	Upper Ucayali, Sept.	E. Bartlett [C.].
$q$ . $\beta$ ad. sk.	[Oyapock, Cayenne.]	Purchased.
r. Ad. sk.	[Bogota.]	Purchased.

## 7. Brotogerys gustavi.

Brotogerys gustavi, Berl. Ibis, 1889, p. 181, pl. vi. (Tuanfué, Peruviæ or.).

Adult. Dark green, underneath a little lighter; pileum slightly tinged with bluish; an orange spot on the chin; bend of the wing, carpal edge, and bastard-wing yellow; primary-coverts and quills blue, edged with green on the outer webs; innermost under wing-coverts green, the greater ones and inner webs of the quills verditergreen; outer tail-feathers green, the remainder blue along the middle and edged with green on the outer webs; central tail-feathers edged with green on both webs; tail underneath green; bill pale horn (flesh-colour?); feet pale. Total length 7.5 inches, wing 4.4, tail 2.8, bill 0.73, tarsus 0.42.

Hab. Upper Huallaga, Eastern Peru.

a. Ad. sk. Tuanfué, Upper Huallaga Salvin-Godman Coll. (G. Garlepp). (One of the typical specimens.)

# 8. Brotogerys tuipara.

Tuipara septima species, Marcgr. Hist. Bras. libr. ix. p. 206 (1648).
Psittacula brasiliensis erythrocephalos, Briss. Orn. iv. p. 383 (1760).
Red-fronted Parrot, Lath. Syn. i. p. 308, n. 115 (1781); id. Gen. Hist. ii. p. 261 (1822).

Psittaeus tuipara, Gm. S. N. i. p. 348, n. 127 (1788); Lath. Ind. Orn. i. p. 129, n. 141 (1790); Shaw, Gen. Zool. viii. 2, p. 555 (1811); Bechst, Kurze Ueb. p. 104 (1811–12); Vieill. N. D. xxv. p. 381 (1817); id. Enc. Méth. iii. p. 1410 (1823).
Psitacus sosove, var., Kuhl, Consp. Psitt. p. 27 (1820); ? Bechst.

Kurze Ueb. p. 86 (1811-12); Voigt, Cuv. Uebers. p. 733 (1831).

Sittace tuipara, ad., Wagl. Mon. Psitt. p. 633 (1832).

Conurus tuipara, part., G. R. Gr. Gen. B. ii. p. 414, n. 31 (1845); id. List Psitt, Brit. Mus. p. 46 (excl. var.) (1859).

Conurus tuiparus, Cab. in Schomb. Guian. iii. p. 727 (1848).

Psittovius tuipara, part., Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 72; Souancé, Rev. et Mag. de Zool. 1856, p. 64 (ad.); Bp. Naumannia, 1856, Consp. Psitt. n. 74 (part.); Sousa, Mus. Nac. *Lisb.* Psittaci, p. 10 (1869).

Brotogeris aurifrons, Cass. Journ. Ac. Philad. iii. p. 155, pl. xiv. f. 2

(1855); Bp. Compt. Rend. xliv. p. 538 (1857). Brotogerys notatus, Sclat. Cat. Am. B. p. 352, n. 2099 (1862); Sclat.

§ Salv. P. Z. S. 1867, p. 588 (Para).

p. 116; Layard, Ibis, 1873, p. 394; Sclat. P. Z. S. 1879, p. 300; Sclat. List Vert. An. 8th ed. p. 353 (1883).

Psittaculus tuipara, Schleg. Mus. P.-B. Psitt. p. 28 (1864); id. op. cit.

Rev. p. 7 (1874).

Sittace tuipara, G. R. Gr. Hand-list, ii. p. 150, n. 8158 (excl. var.) (1870).

Brotogerys notata, Rehnw. Vogelbild, t. xxviii, f. 3 (1878-83); id. Journ. f. Orn. 1881, p. 344 (Consp. Psitt. p. 184).

Adult male. Green, underparts lighter; pileum slightly tinged with blue; narrow frontal band and chin orange; primary-coverts orange; quills deep blue, with the edges of outer webs and tips green; smaller under wing-coverts green, the greater ones and inner webs of the quills below verditer-blue; tail-feathers green, paler below, with a narrow yellow edge on the inner webs of the lateral ones: bill horn-whitish; "feet flesh-colour; iris brown" (Layard). Total length 7.6 inches, wing 4.9, tail 2.7, bill 0.75, tarsus 0.44.

Young. Some of the primary-coverts green. Hab. Lower Amazons.

a. Ad. sk. S. America. Sclater Coll. R. Graham, Esq. [P.]. b. Ad. st. Para. Para, Feb. (E. L. Layard). c. of ad. sk. Tweeddale Coll. d. Ad. sk. Para (Wallace). Sclater Coll. e. Ad. sk. Amazons (A. R. Wallace). Salvin-Godman Coll.  $f. \ \ \$ 2 ad. sk. S. America. Zoological Society's Coll.

# 9. Brotogerys chrysopterus.

Golden-winged Parrakeet, Edw. Glean. vi. p. 177, pl. 293. f. 2 (1760)\*; Lath. Gen. Syn. i. p. 309 (1781); id. Gen. Hist. ii. p. 201 (1822).

<sup>\*</sup> Edwards's figure has about four of the quills following the four outermost of a fine golden or orange-colour like the coverts immediately above, and shows some likeness to B. virescens,

Psittacus alis deauratis, Briss. Orn. App. p. 130, n. 97 (1760). Psittacus chrysopterus, Linn. S. N. i. p. 149, n. 44 (1766); Gm. S. N.

i. p. 348, n. 44 (1788); Lath. Ind. Orn. i. p. 129, n. 142 (1790); Shaw, Gen. Zool. viii. 2, p. 545 (1811); Bechst. Kurze Ueb. p. 83 (1811–12); Vieill. N. D. xxv. p. 373 (1817); id. Enc. Méth. iii. p. 1404 (1823).

Perruche aux ailes d'or, Buff. Hist. Nat. Ois. vi. p. 170 (1779). La Perruche à tache sonci, Levaill. Perr. pl. 58 (1801).

Psittacus calthopticus, Vieill. N. D. xxv. p. 369 (1817); id. Enc. Méth. iii. p. 1402 (1823).

Psittacus sosove, Kuhl (nec Gm.?), Consp. Psitt. p. 27 (1820).

Psittacus cayennensis, Sw. Zool. Ill. i. pl. 1 (1820).

Psittacus vaillanti, Sw. Isis, 1821, p. 65.

Psittacula chrysoptera, Less. Tr. d'Orn. p. 203 (1831). Sittace tuipara, jun., Wagl. Mon. Psitt. p. 633 (1832).

Psittovius tuipara, part., Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 72; Souancé, Rev. et Mag. de Zool. 1856, p. 64 (juv.); Bp. Naumannia, 1856, Consp. Psitt. n. 74 (part.).

Conurus tuipara, var. chrysopterus, G. R. Gr. List Psitt. Brit. Mus.

p. 46 (1859).

Brotogerys tuipara, Sclat. (nec Gm.) Cat. Am. B. p. 347, n. 2098 (1862).

Brotogerys tuipara, jun., Finsch, Papag. ii. p. 104 (1868).

Sittace tuipara, var. chrysopterus, G. R. Gr. Hand-list, ii. p. 150

(1870).

Brotogerys chrysoptera, Sund. Méth. nat. Av. disp. Tent. p. 70 (1872); Sclat. P. Z. S. 1878, p. 1002, 1879, p. 300; Rchnw. Vogelbild. text of pl. xxviii. f. 2 (1878–83); id. Journ. f. Orn. 1881, p. 344 (Consp. Psitt, p. 184); Salv. Cat. B. Strickl. Coll. p. 470 (1882); Sclat. List Vert. An. 8th ed. p. 353 (1883); Salv. Ibis, 1886, p. 68.

Adult. Very much like B. tuipara, from which it differs in having the forehead and the chin-spot brown; size somewhat smaller. Total length 6.8 inches, wing 4.4, tail 2.5, bill 0.75, tarsus 0.44.

Female. Like the male.

Young. Primary-coverts green.

Hab. Guiana, Venezuela, and perhaps also Trinidad \*.

S. America. a. Ad. st. b. Ad. sk. S. America. c. Juv. sk. Bartica Grove, Brit. Guiana, d, e. o ♀ ad. sk. October (H. Whitely). Camacusa, Brit. Guiana, March, June (*H. Whitely*). f, g. ♂ Q ad. sk. Venezuela (Verdey). h. Ad. sk. i. Ad. sk. Trinidad. Pernambuco, Brazil (?) k. Ad. sk.

(Craven).

Purchased. Zool. Soc. Coll. Purchased.

Salvin-Godman Coll.

Salvin-Godman Coll.

Sclater Coll. Salvin-Godman Coll. Sclater Coll.

<sup>\*</sup> In Mr. Sclater's Collection there is a specimen from Pernambuco, but this locality requires confirmation.

### 10. Brotogerys chrysosema.

Brotogerys chrysosema, Natt. MS.; Sclat. P. Z. S. 1864, p. 298; Finsch, Papag. ii. pp. 107, 949, t. 3 (1868); Pelz. Orn. Bras. pp. 261, 447, liii (1871); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 8 (1873); Rehnw. Vogelbild. in the text of t. xxviii. f. 3 (1878-83); id. Journ. f. Orn. 1881, p. 344 (Consp. Psitt. p. 184); Pelz. u. Lor. Ann. d. naturh. Hofm. iii. p. 39 (1888).

Psittaculus chrysosema, Schleg. Mus. P.-B. Psittaci, p. 28 (1864); id.

op. cit. Revue, p. 7 (1874).

Conurus chrysosema, Natt., fide Schleg. Mus. P.-B. Psittaci, p. 28 (1864).Sittace chrysosema, G. R. Gr. Hand-list, ii. p. 151, n. 8164 (1870);

Natt. MS., fide Pelz. Orn. Bras. p. 261 (1871). Brotogerys chrysosoma (err.), Gieb. Thes. Orn. i. p. 481 (1872).

Adult. Dark green, underneath slightly paler; pileum with a slight bluish tinge; forehead and lores yellow-orange; chin orange; primary-coverts yellow; quills deep blue, with the outer edges and tips green; smaller under wing-coverts green, the greater ones and inner webs of the quills below verditer-blue; tail-feathers green, with a narrow yellow edge on the inner webs; the two central ones tinged with blue along the middle: bill whitish horn-colour; feet pale. Total length 7.8 inches, wing 4.8, tail 2.4, bill 0.75, tarsus 0.45.

Hab. Rio Madeira, Amazons Valley.

a. ♀ ad. sk. Cachoeira das Pederneiras, Sclater Coll. (One of Rio Madeira (Natterer). the typical specimens.)

# 11. Brotogerys tui.

Tui quarta species, Marcyr. Hist. Bras. libr. ix. p. 206 (1648);

Licht. Abh. Berl. Ak. 1816-17, p. 167.

Psittacula brasiliensis icterocephalos, Briss. Orn. iv. p. 398 (1760). Petite Perruche de l'Isle St. Thomas, D'Aubent. Pl. Enl. 456. f. 1. Psittacus st. thomæ, Müll. S. N. Suppl. p. 81, n. 69 (1776); Cass.

Pr. Ac. Philad. 1864, p. 241.

Toui à tête d'or, Buff. Hist. Nat. Ois. vi. p. 284 (1779). Gold-headed Parrakeet, Luth. Syn. i. p. 321 (1781); id. Gen. Hist.

ii. p. 277 (1822).

Psittacus passerinus, Bodd.\* (nec Linn.) Tabl. Pl. Enl. p. 27 (1783). Psittaeus tui, Gm. S. N. i. p. 352, n. 139 (1788); Lath. Ind. Orn. i. p. 134, n. 160 (1790); Shaw, Gen. Zool. viii. 2, p. 547 (1811); Bechst. Kurze Ueb. p. 86 (1811–12); Licht. Abh. Berl. Akad. 1816–17, p. 167; Vieill. N. D. xxv. p. 380 (1817); Kuhl, Consp. Psitt. p. 58 (1820); Vieill. Enc. Méth. iii. p. 1410 (1823); Vuigt, Cuv. Uebers. p. 745 (1831).

La Perruche Tui, Levaill. Perr. pl. 70 (1805).

Psittaculus tui, Spix, Av. Bras. i. p. 39 (1824); Brehm, Mon. d. Papag. t. 35 (1852); Schleg. Mus. P.-B. Psittaci, p. 29 (1864); id. op. cit. Revue, p. 70 (1874).

<sup>\*</sup> Boddaert never thought of himself giving a name to the Toui à tête d'or; he confused it with Linne's Psittacus passerinus.

Psittacula tui, Steph. Gen. Zool. xiv. p. 141 (1826); Less. Tr. d'Orn. p. 203 (1831).

Sittace tui, Wagl. Mon. Psitt. p. 634 (1832); G. R. Gr. Hand-list,

ii. p. 151, n. 8161 (1870).

Conurus tui, G. R. Gr. Gen. B. ii. p. 414, n. 30 (1845); Burm. Syst. Ueb. ii. p. 174 (note) (1856); G. R. Gr. List Psitt. Brit. Mus. p. 47 (1859).

Brotogeris tui, Bp. Rev. et Mag. de Zool. 1854, p. 161, n. 76; Souancé, Rev. et Mag. de Zool. 1856, p. 153; Sousa, Mus. Nac. Lisb. Psittari, p. 10 (1869).

Psittovius tui, *Bp. Naumannia*, 1856, *Consp. Psitt.* n. 75. Conurus cassini, *G. R. Gr. List Psitt. Brit. Mus.* p. 47 (1859).

Comurus cassini, G. R. Gr. List Psitt. Brit. Mus. p. 47 (1859).
Brotogerys tui, Sclat. Cat. Am. B. p. 352, n. 2102 (1862); Sclat. & Salv. P. Z. S. 1866, p. 197; Finsch, Papag. ii. p. 108 (1868); Pelz. Orn. Bras. pp. 261, 447, liii (1871); Gieb. Thes. Orn. i. p. 482 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 9 (1873); iid. P. Z. S. 1873, p. 300; Garrod, P. Z. S. 1873, pp. 466, 634; Salv. Cat. B. Strickl. Coll. p. 470 (1882); Sclat. List Vert. An. 8th ed. p. 353 (1883); Tacz. Orn. Pér. iii. p. 209, Tabl. p. 99 (1886); Allen, Bull. Am. Mus. Nat. Hist. ii. p. 104

(1889). Conurus (?) aurifrons, G. R. Gr. in syn. P. tui (Schleg. Mus. P.-B.

Psittaci, p. 29; G. R. Gr. Hand-list, ii. p. 151).

Sittace st. thome, G. R. Gr. Hand-list, ii. p. 151, n. 8162 (1870). Brotogerys passerina, Rehnw. Vogelbild. t. xxviii. f. 4 (1878–83); id. Journ. f. Orn. 1881, p. 345 (Consp. Psitt. p. 185).

Adult. Green; rump, upper tail-coverts, and underparts lighter, or yellowish green; sinciput and sometimes a streak behind the eyes yellow; bastard-wing blue, with the outer webs of the feathers green; primary-coverts bluish green; under wing-coverts yellowish green, the greater ones and inner webs of the quills verditer-blue; tail green, inner webs of the feathers and tail below yellow-green; bill horn-brown; feet pale or flesh-colour; iris brown. Total length 6.8 inches, wing 4.3, tail 2.4, bill 0.6, tarsus 0.44.

Female. No yellow streak behind the eyes.

Hab. Western Brazil, Upper Amazons, Eastern Ecuador, and Eastern Peru.

I do not know whether the yellow streak behind the eye ever

appears in the female.

The locality Bolivia, attributed to this species on the authority of a specimen in Mr. Sclater's Collection, is very doubtful.

a, b. Ad. st.	S. America.	Zoological Society's Coll.
$c, d. \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	Samiria, Peru, August (J. Hauxwell).	Salvin-Godman Coll.
e. Ad. sk.	Rio Javarri, Upper Amazons.	H. W. Bates [C.]. Conurus cassini, Gr.)
$f, g. \ \  \  \  \  \  \  \  \  \  $ ad. sk.	Yquitos, Upper Amazons, June (H. Whitely).	Salvin-Godman Coll.
h. 3 ad. sk.	Yquitos, Upper Amazons, March (H. Whitely).	Sclater Coll.
i. 3 ad. sk.	Nauta, April.	H. Whitely [C.].
k. Ad. sk.	Pebas, E. Peru (J. Hauxwell).	Sclater Coll.
1. Ad. sk.	Bolivia?	Sclater Coll.
m, n. Skeletons.		

## Subfamily III. PIONINÆ.

Tail short and broad, square or rounded, about half the length of the wing, longer in *Triclaria* and *Deroptyus*; bill moderately strong, sometimes longer than deep, sometimes the reverse; culmen generally with a groove; upper mandible frequently notched and always with the palatine portion of the hook furnished with a file-like surface; gonys frequently with a ridge along the middle. Cere, surrounding the whole base of the bill, swollen in front of the nostrils and always naked. Wings with the second, third, and fourth primaries generally the longest. Orbital ring in several genera complete. General colour mostly green.

Range. Tropical America and Africa.

## Key to the Genera.

a. No tufted oil-gland; tail moderate or short. a'. Tail moderate, rounded; under tail-b'. Tail very short and nearly even; under c'. Tail moderate and nearly even; under tail-coverts always red; orbital ring complete ...... 19. Pionus, p. 321. b. Oil-gland tufted. d'. Tail rather long, more than three fourths of the length of the wing; bill rather short, deeper than long. a". Feathers of the hind neck broad, e'. Tail rather short, less than half the length of the wing. c''. Bill as deep as it is long, with the under mandible longer than deep a'''. Tail-feathers more or less acuminate, constantly with blue tips; upper tail-coverts reaching about the half of the tail. a4. Head entirely feathered . . . . . 22. Pionopsittacus, p.338. nearly to the tips, generally brightly coloured and sharply bordered at the tips; upper tail-coverts reaching nearly to the tip of the tail; size 

P

 $\alpha$ 

b.

1 11 7

d". Bill very deep, with the under mandible deeper than long. c". Second, third, and fourth primaries the longest; first equal to the fifth
17. CHRYSOTIS. Type.
Psittaeus, subgenus Amazona, Less. Tr. d'Orn. p. 189 (1831)
Amazona, Less. Descr. Mann. et Ois. p. 196 (1847); Schleg. Mus. PB. Psittaci, p. 49 (1864). Oenochrus, Bp. Rev. et Mag. de Zool. 1854, p. 151. C. vinacea. Onochrus, Bp. Naumannia, 1856, Consp. Psitt. gen. 22.
Androglossa, Rchnw. (nec Vig.) Journ. f. Orn. 1881, p. 365 (=Chrysotis, Sw.).
Range. From Northern Mexico, through Central America Peru, Bolivia, Paraguay, and Argentine Republic.
Key to the Species.
<ul> <li>General plumage orange-brown; greater under wing-coverts and bases of the inner webs of the primaries yellow</li></ul>
dark purple
<ul> <li>a<sup>4</sup>. Forehead red, cheeks green</li></ul>
of the inner webs of the quills blue. \( \sqrt{versicolor}, \text{ p. 276.} \)  b"'. Under surface green.  c^4. A red band or patch on the lower throat; forehead and cheeks blue; greater under wing-coverts and bases of the inner webs of the quills below blue. \( \sqrt{bouqueti}, \text{ p. 277.} \)

to

 No red band or patch on the lower throat.

a<sup>5</sup>. No red colour on the forehead, and no blue cheeks.

a6. No red colour on the tail.

a<sup>7</sup>. Metacarpal edge green or yellowish green.

a<sup>8</sup>. Pileum distinctly blue ....

b. Pileum green, with no blue tinge or scarcely any.....

b<sup>7</sup>. Metacarpal edge red; size very large.

c<sup>8</sup>. Middle of the crown yellow, sometimes tinged with red behind .....

b<sup>6</sup>. Tail partly red or orange-red, especially at the base.

c<sup>7</sup>. With no yellow and no blue on the head, which is entirely green; the red colour on the inner webs of the lateral feathers much extended, reaching very near to the tips . . . .

d'. With the head partly yellow.

e's. Head partly blue.

a<sup>3</sup>. Pileum tinged with blue; lores blue; middle of the crown more or less yellow; cheeks and throat ochreous yellow; bend of the wing green, with no

f<sup>8</sup>. Head with no blue.

c°. Forehead and lores whitish; vertex and region round the eyes yellow; bend of the wing and cubitaledge bright yellow; the last often mixed with red marks.

d<sup>9</sup>. Forehead not whitish.

a<sup>10</sup>. Cheeks green, generally with no part of them yellow.

a<sup>11</sup>. No yellow on the hind neck.

guatemalæ, p. 279.

virenticeps, p. 280.

farinosa, p. 280.

inornata, p. 281.

mercenaria, p. 282.

amazonica, p. 283.

æstiva, p. 285.

ochroptera, p. 288.

<ul> <li>a<sup>12</sup>. Crown yellow, bordered in front by a pale green frontal band; larger.</li> <li>b<sup>12</sup>. Sinciput yellow; the yellow extended to the frontal edge, where is</li> </ul>	ochrocephala, p. 289.
no green frontal band; size smaller $b^{11}$ . A broad yellow band or patch on the hind	panamensis, p. 291.
neck  b10. Cheeks entirely yellow, like the whole of the head and neck, or green on the lower part; bend of the wing and cubital edge	auropalliata, p. 291
broadly red; bill yellow	levaillanti, p. 293.
<ul> <li>c<sup>6</sup>. Forehead blue; bend of the wing red</li></ul>	nattereri, p. 294.
wing-speculum orange-yellow  c <sup>5</sup> . Forehead, or the anterior part of the pileum, or even the whole of	dufresneana, p. 295.
it, red.  e <sup>s</sup> . Pileum entirely red in the old birds; wing-speculum red.  e <sup>7</sup> . Cheeks tinged with blue  f <sup>7</sup> . Cheeks and ear-coverts bright grass-green; a blue band from the temporal region running down the sides of the neck;	rhodocorytha, p. 296.
no red colour at the base of the tail	viridigena, p. 297.
red at the bases of the lateral tail-feathers	fînschi, p. 298.
c <sup>10</sup> . Occiput yellowish; lores, near the eyes, deep purple-red  d <sup>10</sup> . Occiput with no yellowish tinge, and, like the pileum and hind	diademata, p. 299.

neck, green, with lilac	
subterminal bands;	
lores and frontal band	
uniform red	salvini, p. 300.
$f^9$ . Cheeks yellow-green; red	/ 1
colour of the frontal band	
extended over the eyes;	
pileum lilac, with the	
edges of the feathers pale	
red or purple; occiput and	
hind neck green, with no	
conspicuous lilac subter-	
minal bands near the	
black edges of the fea-	
thers	lilacina, p. 301.
$h^7$ . Cheeks green, with the upper	
part, below the eyes, yellow.	autumnalis, p. 302.
b'. Wing with no red or orange-red speculum.	
c'''. Sides of the body, under the wings,	
orange-red; head more or less yellow.	xanthops, p. 304.
d'''. No orange-red spot on the sides.	
$e^4$ . Forehead red.	
d <sup>5</sup> . Primary-coverts green or blue, but	
not red; bend of the wing green,	
with no red marks; no red colour	
round the eyes.	
$g^{\mathfrak{d}}$ . A blue tinge on the sides of the	
occiput.	
17. Metacarpal edge red; cheeks	
and chin blue; pileum more	7
or less vinous red	brasiliensis, p. 305.
k <sup>7</sup> . No red colour on the meta-	
carpal edge.	
i <sup>8</sup> . Primary-coverts green; lower	
back and rump red; pileum	hadini n 207
tinged with red	bodini, p. 307.
$g^9$ . Lower back and rump red;	
lateral tail-feathers with	
no red at the base	festiva, p. 307.
$h^9$ . Lower back and rump	Jeonette, p. 301.
green, or with the green	
feathers edged with red;	
lateral tail-feathers red	
at the bases	chloronota, p. 308.
$h^6$ . No blue tinge on the sides of the	, , , , , , , , , , , , , , , , , , , ,
occiput; feathers conspicuously	
edged with black; bastard-wing,	
primary-coverts, and primaries	
pale blue, with a greenish tinge.	vittat a, p. 309
e <sup>5</sup> . Primary-coverts red; no red at the	
base of the lateral tail-feathers.	
i <sup>6</sup> . Bend of the wing, bastard-wing,	
lores, and feathers round the	
eyes red	<i>pretrei</i> , p. 310
k <sup>6</sup> . Bend of the wing, lores, and fea-	, 07.
thers behind the eyes green	tucumana, p. 311.

f4. Forehead not red (except in C. albifrons, which has a narrow red frontal edge). f. Forehead or sinciput white. l. Cheeks and throat green. F. No red patch on the middle of the abdomen; primary coverts red in the adult males, green in the young and females (?). l<sup>8</sup>. Lores and region round the eves red; ear-coverts green. albifrons, p. 311. m<sup>8</sup>. Lores yellow; region round the eyes, except in front, red; ear-coverts black . . . . × xantholora, p. 313.  $m^7$ . A dull red patch on the middle of the abdomen; ear-coverts black ..... ventralis, p. 314. m6. Cheeks and throat rose-red. n<sup>7</sup>. Feathers of the hind neck green, with no red; middle of the abdomen more or less (leucocephala, p. 315. caymanensis, p. 317. dull red ..... o<sup>7</sup>. Feathers of the hind neck dull | bahamensis, p. 317. reddish, with green subapical bands and black edges; no red tinge on the middle of the abdomen . . . . . . . . . v collaria, p. 318. q5. Forehead and sinciput dark bluish green; primary coverts red; bill dark horn-colour, with a whitish spot on the sides towards the base; size small ..... agilis\*, p. 319.

\* I am not acquainted with the following species:—

#### CHRYSOTIS CANIFRONS.

Chrysotis eanifrons, Lawr. Ann. N. York Ac. ii. p. 381 (1883) (Island of Aruba, West Indies); Ibis, 1883, p. 371; Rehnw. u. Schal. Journ. f. Orn. 1885, p. 460.

The general colouring is green, the abdomen washed with bluish, the feathers of the hind neck edged with black, and those of the throat mixed with yellow; the front, the chin, and upper part of the throat are greyish ash; this colour is bordered on the crown with dull pale yellow; sides of the head dull yellow; the primaries are deep blue, with a speculum of bright scarlet; the bend of the wing is clear yellow, marked with scarlet next the body; thighs grey; tail-feathers green, ending rather broadly with light greenish yellow; the basal portions of the feathers are yellow for half their length, and are marked with red; the outer feather is bluish on the outer web; bill whitish horn-colour, with the tip dusky; feet dark grey. Dimensions approximately: length 14 inches, wing 9, tail 6. (Lawrence.)

Hab. Island of Aruba, West Indies.

Obs. The most marked difference from its allies seems to be the ashy front

and chin (Lawrence). The typical and only known specimen described by Lawrence is lost. This species is not mentioned in Cory's 'Birds of the West Indies.'

## 1. Chrysotis guildingi.

Psittaeus guildingii, Viy. P. Z. S. 1836, p. 80; Bourj. Perr. pl. 64 (1837-38); G. R. Gr. Gen. B. ii. p. 421, n. 28 (1846); Fraser,

Zool. Typ. pl. 57 (1849).

Chrysotis guildingi, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 84; id. Naumannia, 1856, Consp. Psitt. n. 86; Bolle, Journ. f. Orn. 1856, p. 170; G. R. Gr. List Psitt. Brit. Mus. p. 80 (1859); Finsch, Papag. ii. p. 559 (1868); G. R. Gr. Hand-list, ii. p. 164, n. 8319 (1870); Gieb. Thes. Orn. i. p. 682 (1872); Sclat. & Salt. Nomencl. Av. Neotrop. p. 113, n. 20 (1873); Sclat. P. Z. S. 1874, p. 324, 1877, p. 683; Laur. Pr. U.S. Nat. Mus. i. pp. 193, 487 (1878); Sclat. P. Z. S. 1879, p. 300; Lister, Ibis, 1880, p. 42; Sclat. P. Z. S. 1881, p. 627; Salv. Cat. B. Strickl. Coll. p. 467 (1882); Sclat. List Vert. An. 8th ed. p. 348 (1883); Cory, List B. West Ind. p. 20 (1885); id. Auk, 1886, p. 462; id. Birds of W. Ind. p. 185 (1889); Sclat. P. Z. S. 1889, p. 327; Marsh. Papag. p. 55 (1889); Tristr. Cat. Coll. B. p. 79 (type) (1889).

op. eit. Revue, p. 26 (1874). Androglossa guildingi, Rehnw. Journ. f. Orn. 1881, p. 380 (Consp.

Psitt. p. 220); id. Vogelbild, Nachtr. 127 (1883).

Adult. Orange-brown; edges of the feathers black; pileum white, turning to yellow on the hind part; lores and feathers under the eyes white; occiput, sides of the head, and throat blue, with the bases of the feathers yellowish green; lower part of the neck more or less tinged with green; the feathers of the abdomen green near the black edges; under tail-coverts green-yellow; bastard-wing and primary-coverts green, the first with a bluish tinge, the last orange at the base of the outer webs; an orange wing-speculum at the base of the first three or four secondaries; primaries black, with the bases yellow; secondaries blue, edged with green, the first three or four with the bases of the outer webs orange, forming the wingspeculum; the bases of the inner secondaries yellow; tertials partly green; the upper part of the metacarpal edge yellow-orange, the lower part yellowish green, with the edges of the feathers blue; smaller under wing-coverts orange, mixed with green, greater ones and bases of the inner webs of the quills yellow; tail above yellow and orange at the base, blue in the middle, and yellow at the tip; tail below orange at the base, yellow at the tip, green in the middle: bill pale horn-colour; tarsus grey. Total length about 17 inches, wing 10.6, tail 6.4, bill 1.5, tarsus 0.8.

Female. Like the male. Hab. St. Vincent, W. Indies.

a. Ad. sk. St. Vincent, W. Indies.

Zoological Society's Coll.\* (One of the typical specimens.)

<sup>\*</sup> Mr. Fraser (Zool. Typ. p. 57) says that one of the original specimens was bought by the Zoological Society, and this, which is now in the British Museum, has been considered by Dr. Finsch to be the type, while the Rev. Canon Tristram claims to have the type in his own collection.

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St. Vincent, W. Indies Salvin-Godman Coll. b. Ad. sk.

(Zool. Soc.). St. Vincent, W. Indies Sclater Coll. c. 9 ad. sk.

(Zool. Soc.). St. Vincent, W. Indies Salvin-Godman Coll. d-o.  $\mathcal{J} \mathcal{Q}$  ad. et ad. sk. (D. W. Smith).

p. Skeleton.

## 2. Chrysotis augusta.

Psittaeus havanensis, Kuhl (nec Gm.), Consp. Psitt. p. 79 (1820);

Wagl. Mon. Psitt. p. 746 (1832).

Psittacus augustus, Vig. (nec Shaw, 1792) P. Z. S. 1836, p. 80;

Bourj. Perr. pl. 63 (1837–38); Gr. & Mitch. Gen. B. ii. pl. 104 (1846); Gulliv. P. Z. S. 1862, p. 102, 1875, p. 489. Chrysotis augustus, G. R. Gr. Gen. B. ii. p. 422, n. 16 (1846); id.

List Psitt. Brit. Mus. p. 84 (1859). Oenochrus augustus, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 82;

Gen. Gr. Hand-list, ii. p. 165, n. 8345 (1870).

Onochrus havanensis, Bp. Naumannia, 1856, Consp. Psitt, n. 104 (?).

Amazona augustus, Schleg. Mus. P.-B. Psittaci, p. 50 (1864).

Chrysotis augusta, Sclat. P. Z. S. 1865, p. 437; Finsch, Papag. ii. p. 557 (1868); Sclat. P. Z. S. 1871, p. 266; Gieb. Thes. Orn. i. p. 680 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, u. 19 (1873); Sclat. P. Z. S. 1874, p. 324; Sclat. & Salv. Ibis, 1878, p. 195; Lawr. Pr. U.S. Nat. Mus. i. pp. 62, 487 (1878); Ober, Camps in the Caribbees, p. 112 (1880); Sclat. P. Z. S. 1881, p. 627; id. List Vert. An. 8th ed. p. 348 (1883); Cory, List B. West Ind. p. 20 (1883); id. Auk, 1886, p. 461; id. Birds of W. Ind. p. 184 (1889); Sclat. P. Z. S. 1889, pp. 326, 327; Marsh. Papag. p. 55 (1889).

Amazona augusta, Schleg. Mus. P.-B. Psittaci, p. 26 (1874). Androglossa augusta, Rehnw. Journ. f. Orn. 1881, p. 379 (Consp. Psitt. p. 219); id. Vogelbild. t. xxxii. f. 7 (1883).

Adult. Head, neck, breast, and abdomen dark purple-blue, with the edges of the feathers black; feathers of the pileum and occiput with shining dark green edges; feathers of the upper breast and vent distinctly purple; back, rump, upper and under tail-coverts, sides, flanks, and thighs green, the feathers edged with blackish, and more or less blue near the edges; wings green; metacarpal edge and wing-speculum erimson; bastard-wing and primarycoverts green; primaries dark brown, with the bases of the outer webs green; outer secondaries dull purple, inner ones green, with dull blue tips; smaller under wing-coverts green, tipped with blue, the greater ones and bases of the inner webs of the quills below dull green; tail above dull reddish brown, with the tip vinous, the central feathers tinged with green, and also the lateral ones at the base; the outer tail-feather entirely reddish brown; tail below reddish brown, with green reflexions: "upper mandible dark horncolour, with a whitish mark on its side at the base; the under mandible is lighter; the feet blackish brown" (Lawrence). Total length 19 inches, wing 11, tail 7, bill 1.7, tarsus 0.75. Female. Like the male, perhaps a little duller.

Young. Has the occiput and hind part of the head green; also the posterior parts of the cheeks are tinged with green.

Hab. Dominica, W. Indies.

a. Ad. sk.
 b. Q ad. sk.
 C. Ad. sk.
 Dominica, W. Indies (Zool. Salvin-Godman Coll. Society).
 Dominica, W. Indies (Ober) Sclater Coll

c. Ad. sk.
 d. Imm. sk.
 Dominica, W. Indies (Ober).
 Sclater Coll.
 Brit. Assoc. [P.].
 (Ramage).
 [St. Thomas.]
 Purchased.

# 3. Chrysotis vinacea.

Loro garganta roxa, Azara, Apunt. Hist. Nat. Parag. i. p. 458, no. 286 (1803).

Maracana à con rouge, Azara, Voy. (ed. Sonn.), iii. p. 76 (1809).
 Psittacus tarabe, part., Vieill. N. D. xxv. p. 321 (1817); id. Enc. Méth. iii. p. 1371 (1823).

Psittacus vinaceus, Prince Maximil. M8.; Kuhl, Consp. Psitt. p. 77 (1820); Wied, Reise, ii. p. 198 (1821); id. Beitr. iv. p. 220 (1832); Wagl. Mon. Psitt. p. 595 (1832); Hahn, Orn. Atl., Papag. p. 52, t. 37 (1835); Hartl. Syst. Verz. Ges. Mus. p. 87 (1844); id. Ind. Azara's Apunt. p. 18 (1847); Burm. Syst. Veb. ii. p. 184 (1856). Psittacus columbinus. Spix. Av. Bras. i. p. 40. t. xvvii. (1824);

Psittacus columbinus, Spi.v., Av. Bras. i. p. 40, t. xxvii. (1824);

Bourj. Perr. pl. 65 (1837-38); Brehm, Mon. d. Papag. t. 38.

Psittacus dominicensis, part., Cuv. Règn. An. i. p. 465 (1829);

Voigt, Cuv. Uebers. p. 741 (1831). Chrysotis columbinus, Sw. Class. B. ii. p. 301 (1837).

Chrysotis vinaceus, G. R. Gr. Gen. B. ii. p. 422, n. 14 (1846).

Oenochrus vinaceus, Bp. Rev. et May. de Zool. 1854, p. 151, n. 81; Souancé, Rev. et May. de Zool. 1856, p. 153; Sousa, Mus. Nac. Lisb. Psittaci, p. 10 (1869); G. R. Gr. Hand-list, ii. p. 165, n. 8343 (1870).

Onochrus vinaceus, Bp. Naumannia, 1856, Consp. Psitt. n. 105. (Psittacus?) fimbriolatus, Licht., fide Bp. Naumannia, 1856, Consp. Psitt. in syn. O. vinacei.

Chrysotis vinacea, G. R. Gr. List Psitt. Brit. Mus. p. 84 (1859);
Sclat. Cat. Am. B. p. 354, n. 2112 (1862); Finseh, Papag. ii.
p. 537 (1868); Pelz. Orn. Bras. pp. 265, 448, liii (1871); Gieb.
Thes. Orn. i. p. 683 (1872); Sclat. & Salv. Nomenel. Av. Neotrop.
p. 113, n. 13 (1873); Rehnw. Vogelbild. t. xix. f. 3 (1878-83);
Sclat. P. Z. S. 1881, p. 968; White, P. Z. S. 1882, p. 621; Sclat.
List Vert. An. 8th ed. p. 347 (1883); Berl. u. Jhering, Zeitschr.
f. ges. Orn. 1885, p. 163; Berl. Journ. f. Orn. 1887, p. 122; Selat.
Argent. Orn. ii. p. 46 (1889).

Amazona vinacea, Schleg. Mus. P.-B. Psittaci, p. 50 (1864); id. op. cit. Revue, p. 26 (1874); Allen, Bull. Am. Mus. Nat. Hist. ii. p. 264 (1889).

P. Dolova, Androglossa vinacea, Rchnw. Journ. f. Orn. 1881, p. 372 (Consp. Psitt. p. 212).

Adult. Green, the feathers edged with black; frontal band and lores red; long feathers of the hind neck green, with a bluish-grey band near the black edges; chin red; breast and, more or less, also the abdomen reddish vinous, with a bluish tinge near the black edges of the feathers; under and upper tail-coverts yellowish green; meta-

т 2

carpal edge red; a red speculum at the base of the outer webs of the three first secondaries; bastard-wing and primary-coverts green, first primary black with the outer web blue; the remaining primaries have the outer webs green towards the base, blue towards the tips; secondaries green, with no blue tips; greater under wing-coverts and part of the inner webs of the quills towards the base verditergreen; tail green, with the tip gradually turning to yellowish green, and with the base of the lateral feathers bright red on the inner web, dull and dark purple-red on the outer one: "bill red, with white tip; feet olive-grey; iris orange" (Wied). Total length about 14.5 inches, wing 8.2, tail 4.5, bill 1.15, tarsus 0.7.

Female. A little duller: bill less bright red (Wied).

Young. Red frontal band duller; feathers of the breast less bright vinous red and with broader green edges; metaearpal edge yellow: bill red only at the base; iris lemon-yellow (Wied).

Hab. South-eastern Brazil, Paraguay, and N. Argentina.

The first specimen mentioned below differs from the others in having the bastard-wing, the primary-coverts, and the base of the outer webs of the primaries with a bluish tinge; also the under surface shows very distinctly the same tinge.

a. Ad. sk.	Brazil.	Sclater Coll.
b. ♂ ad. sk.	Ytararé, Brazil, Feb. (Natterer).	Salvin-Godman Coll.
c. ♂ ad. sk.	Concepcion, Misiones, Arg. Rep., June (E. W. White).	Salvin-Godman Coll.
d. Ad. sk.	Bahia (Wucherer).	Salvin-Godman Coll.
e. ♀ ad. sk.	Brazil.	Zoological Society's
,		Coll.

#### 4. Chrysotis versicolor.

Psittacus Amazonicus gutture cæruleo, Briss, Orn. iv. p. 26, pl. xxv. f. 1 (1760).

Perroquet de la Havane, D'Aubent. Pl. Enl. 360.

Psittaens versicolor, Mill. S. N. Suppl. p. 78, n. 56 (1776); Cass. Pr. Ac. Nat. Sc. Philad. 1864, p. 240.

Crik à face bleue, Buff. Hist. Nat. Ois. vi. p. 227 (1779).

Blue-fronted Parrot, Lath. Syn. i. p. 291 (1781); id. Gen. Hist. ii. p. 247 (1822).

Psittacus cyanorynchus (!), Bodd. Tabl. Pl. Enl. p. 22 (1783).

Psittacus havanensis, Gm. S. N. i. p. 342, n. 117 (1788); Lath. Ind. Orn. i. p. 124, n. 121 (1790); Shaw, Gen. Zool. viii. 2, p. 531 (1811); Beckst. Kurze Ueb. p. 98 (1811–12); Steph. Gen. Zool. xiv. p. 106 (1825); Voigt, Cuv. Uebers. p. 742 (1831); Less. Tr. d'Orn. p. 196 (1831); Wagl. Mon. Psitt. p. 596 (1832).

Psittagus even vis Vivill N. D. xvv. p. 325 (1817); id. Enc. Méth.

Psittacus cyanopis, Vieill. N. D. xxv. p. 325 (1817); id. Enc. Méth.

iii. p. 1372 (1823).

Chrysotis havanensis, Sw. Class. B. ii. p. 301 (1837); G. R. Gr. Gen. E. ii. p. 422, n. 15 (1846); Finsch, Papag. ii. p. 357 (1868). Chrysotis cyanorhynchus, G. R. Gr. Gen. B. iii. App. p. 20 (1849). Oenochrus havanensis, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 83.

Ouochrus havanensis, Bp. Naumannia, 1856, Consp. Psitt. n. 104. Chrysotis cyanorhyncha, G. R. Gr. List Psitt. Brit. Mus. p. 84 (1859).

Amazona cyanorhyncha, Schley. Mus. P.-B. Psittaci, p. 50 (1864); id. op. cit. Revue, p. 26 (1874).

Chrysotis cyanops, Finsch, Papag. ii. p. 523 (1868).

Chrysotis cyanopsis, Finsch, Papag. ii. p. 962 (1868); Gieb. Thes. Orn. i. p. 681 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 7 (1873).

Oenochrus versicolor, G. R. Gr. Hand-list, ii. p. 165, n. 8344

(1870).

Chrysotis bouqueti, Sclat. (nec Bechst.) P. Z. S. 1874, pp. 323, 324, 1875, p. 61, pl. xi., pp. 316, 685; id. List Vert. An. 1877, p. 263,

1879, p. 300; Allen, Bull. Nutt. Orn. Club, v. p. 169 (1880). Chrysotis versicolor. Sclat. P. Z. S. 1881. p. 627; id. Ibis, 1881, p. 414; id. List Vert. An. 8th ed. p. 348 (1883); Cory, List B. West Ind. p. 20 (1885); id. Auk, 1886, p. 463; id. Birds W. Ind. p. 186 (1889); Sclat. P. Z. S. 1889, pp. 327, 395; Marsh. Papag. p. 55 (1889); Sclat. Ibis, 1889, p. 565.

Androglossa versicolor, Relme, Journ. f. Orn. 1881, p. 369 (Consp. Psitt. p. 209); id. Vogelbild. Nachtr. 121 (1883).

Adult male. Green, the feathers strongly edged with black, especially on the upper parts; sinciput, sides of the head, and throat blue; forehead, lores, and cheeks tinged with purple; a broad red band across the lower throat: breast and abdomen yellowish green, each feather near the black edge and on the concealed base dull pale red; upper and under tail-coverts yellow-green; metacarpal edge yellowish green; a red wing-speculum, formed by the bases of the outer webs of the first three or four secondaries; first primary black, the remainder black with outer webs towards the bases deep blue, like the primary-coverts: the outermost secondaries blue near the tips, the inner ones green; smaller under wing-coverts yellowish green, the greater ones and bases of inner webs of the quills below verditer-blue; tail with a broad green-vellow band at the tip, the central feathers green except at the tip, the lateral feathers with the basal half of the outer webs blue, deeper on the outer tail-feather, and with a red spot at the very base of the inner webs of the first three feathers; tail below towards the base black, with a red spot at the base of the inner webs of the outer three feathers: bill hornblackish, with the base of the upper mandible yellowish; iris orange. Total length about 16.5 inches, wing 10.2, tail 6.5, bill 1.4, tarsus 0.7.

Hab. St. Lucia, W. Indies.

Antilles. Purchased. a. Ad. sk. St. Lucia, W. Indies (Semper). Sclater Coll. b. Ad. sk. St. Lucia, W. Indies (Zoological) Sclater Coll. c, d. ♀ ad. sk. Society).

## 5. Chrysotis bouqueti.

Blue-faced Green Parrot, Edw. Glean. v. pl. 230 (1758); Lath. Syn. i. p. 293, n. 96 (1781).

Psittaeus arausiaeus (!), Müll. S. N. Suppl. p. 79, n. 63 (1776); Cass. Pr. Ac. Nat. Sc. Philad. 1864, p. 240.
Psittaeus autumnalis, var. β, Gm. S. N. p. 345 (1788); Lath. Ind.

Orn. i. p. 124 (1790).

Le Perroquet Bouquet, Levaill. Perr. pl. 135 (1805).

Psittacus bouqueti, Bechst. Lath. Uebers. p. 99, n. 167 (1811); Kuhl, Consp. Psitt. p. 76 (1820); Desm. Dict. Sc. Nat. xxxix. p. 101 (1826); Wagl. Mon. Psitt. p. 593 (1832); Brehm, Mon. d. Papag. t. 54.

Psittacus cærulifrons, Shaw, Gen. Zool. viii. p. 515 (1811); Cuv. Règn. An. i. p. 464, note (1829); Voigt, Cuv. Uebers. p. 741 (1831).

? Psittacus autumnalis, var., Vieill. N. D. xxv. p. 326 (1817). Autumnal Parrot, var. A, Lath. Gen. Hist. ii. p. 249 (1822). Psittacus cyaneocapillus, Vieill. Enc. Méth. iii. p. 1373, pl. 229. f. 1

(1823); Burm. Syst. Ueb. ii. p. 186 (note) (1856). Chrysotis cyanocephalus, Sw. Class. B. ii. p. 301 (1837).

Chrysotis bouqueti, G. R. Gr. Gen. B. ii. p. 422, n. 11 (1846) \*; Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 101; id. Naumannia, 1856, Consp. Psitt. n. 96; G. R. Gr. List Psitt. Brit. Mus. p. 81 (1859); Finsch Papag. ii. p. 555 (1868); Pelz. Orn. Bras. p. 266 (note) (1871); Giel. Thes. Orn. i. p. 680 (1872); Sclat. P. Z. S. 1881, (1811); Gree. Thes. Orn. 1, p. 080 (1872); Sciat. P. Z. S. 1881, p. 627; id. Ibis, 1881, pp. 412, 414; Cory, List Birds W. Ind. p. 20 (1885); id. Auk, 1886, p. 462; id. Birds W. Ind. p. 185 (1889); Sciat. P. Z. S. 1889, pp. 326, 327; id. Ibis, 1889, p. 565.
Chrysotis arausiaca, G. R. Gr. Hand-list, ii. p. 165, n. 8339 (1870). Chrysotis nichollsi, Laur. Pr. U.S. Nat. Mus. iii. p. 254 (1880); Sciat. P. Z. S. 1881, p. 627; id. Ibis, 1881, p. 413; Rehnw. u. Schal.

Journ. f. Orn. 1883, p. 417.

Androglossa bouqueti, Rehnw. Journ. f. Orn. 1881, p. 370 (Consp. Psitt, p. 210); id. Vogelbild, Nachtr. 122 (1883).

Adult male. Green, the feathers edged with black; face or forehead, lores, periophthalmic region, anterior part of the cheeks, and throat purple-blue; a red spot on the middle of the lower throat; upper and under tail-coverts yellow-green; primary-coverts very dark green, nearly black, with a blue tinge at the tip; first primary entirely black, the others with the bases of the outer webs deep blue, slightly tinged with green on the edges; a red wing-speculum at the base of the outer webs of the first three secondaries; secondaries with a blue tinge near the tips; under wing-coverts green, the greater ones verditer-green; inner webs of the quills below verditer-blue; tail green, with a broad green-yellow band at the tip of the lateral feathers, central feathers with narrow greenvellow tips; the four first tail-feathers with the bases of the inner webs red, the outer feather edged with blue at the base of the outer web; tail underneath yellow-green at the apical half, green at the basal half, the inner webs of the lateral feathers with red bases: bill light horn-colour, with the base of the upper mandible vellowish; feet dusky. Total length about 16 inches, wing 9.5, tail 5.5, bill 1.35, tarsus 0.75.

Hab. Dominica, W. Indies.

Obs. Some specimens have the primary-coverts decidedly green.

a. Ad. sk. b. Ad. sk.

Dominica (Ober). Dominica (Ober). Purchased Salvin-Godman Coll.

<sup>\*</sup> G. R. Gray, among the synonyms, quotes P. pileatus, Cuv., but the bird so named in the Regne Anim. i. p. 465 (note) is Psittaeus caica, Lath.

c. Ad. sk.
 d, e. of ad. et ad. sk.
 f. Ad. sk.

Dominica (Ober). Dominica, June (Ramage). Dominica (Angas). Sclater Coll. Brit. Assoc. [P.]. Sclater Coll.

## 6. Chrysotis guatemalæ.

Psittacus nov. sp. ex Guatemala, Hartl. Verz. Brem. Samml. p. 87 (1844).

Chrysotis —— ?, Sclat. & Salv. Ibis, 1859, p. 138.

Chrysotis guatemalæ, Hartl. in Mus. Brem.; Sclat. Ibis, 1860, p. 44; id. P. Z. S. 1860, p. 253; id. Cat. Am. B. p. 353, n. 2107 (1862); Finsch, Papag. ii. p. 562, t. 4 (1868); Sclat. § Salv. P. Z. S. 1870, p. 837; Sclat. P. Z. S. 1870, p. 896; G. R. Gr. Hand-list, ii. p. 165, n. 8335 (1870); Salv. Ibis, 1871, pp. 87, 98 (part.); Lawr. Ibis, 1871, p. 250; Gieb. Thes. Orn. i. p. 682 (1872); Sclat. § Salv. Nomencl. Av. Neotrop. p. 113, n. 21 (part.) (1873); Sclat. P. Z. S. 1875, p. 61, 1878, p. 1018; Rehuw. Vogelbild. t. xix. f. 2 (1878–83); Sclat. List Vert. An. 8th ed. p. 349 (1883); Nutting, Pr. U.S. Nat. Mus. vi. p. 395 (Nicaragua) (1883).

Chrysotis pulverulenta, *Lawr.* (nec Gm.) Ann. Lyc. N.Y. ix. p. 131 (1868); Frantz. Journ. f. Orn. 1869, p. 365; Salv. Ibis, 1870,

p. 113.

Amazoua guatemalæ, Schley. Mus. P.-B., Psittaci, Revue, p. 27 (1874); Ridgw. Man. N. Am. Birds, p. 587 (1887).

Androglossa guatemalæ, Rchnw. Journ. f. Orn. 1881, p. 367 (Consp. Psitt. p. 207).

Adult male. Green, upper parts mealy; pileum and superciliary band bluish; occiput with a slight lilac-grey tinge; feathers of the hind neck edged with blackish; cheeks and underparts yellowish green: a red speculum on the wing at the base of the first four secondaries; first primary black, the remainder black with the basal half of the outer webs green, the black part of the outer webs more or less blue near the green colour; tip of the secondaries black, more or less tinged with blue; greater under wing-coverts verditerblue, edged with yellowish; inner webs of the quills below partly verditer-green; tail green, with a broad band at the apical half greenish yellow or decidedly yellow: "iris orange-red; bill bluish black (with a yellowish or reddish spot near the base of the upper mandible); feet greenish ashy" (Sumichrast). Total length about 16 inches, wing 9.5, tail 5.8, bill 1.55, tarsus 0.9.

Hab. Southern Mexico and Central America, as far as Honduras,

and Nicaragua (?)\*.

In some specimens there are traces of red spots on the middle of the inner webs of the lateral tail-feathers, and the outer tail-feather is edged with bluish on the outer web.

a. ♀ ad. sk.

b, c, d. ♂ ad. et ad. sk. Potrero, N. Cordova, Mexico, December (J. Sumichrast). Sources of R. de la Pasion, Vera Paz, Guatemala, February (O. Salvin).

Salvin-Godman Coll.

Salvin-Godman Coll.

<sup>\*</sup> As I have never seen specimens from Nicaragua I do not know whether they belong to this species or to the Costa Rica form.

O. Salvin, Esq. [C.]. e. Ad. sk. Vera Paz, Guatemala. Choctum, Vera Paz, Guate-Tweeddale Coll. f. Ad. sk. mala (O. Salvin). O. Salvin, Esq. [P.]. g. Ad. sk. Guatemala. h. Ad. sk. Honduras (Leyland). Sclater Coll. of species.) i. & ad. sk. C. America. Zool, Soc. Coll.

## 7. Chrysotis virenticeps.

 Chrysotis guatemalæ, Frantz. (nec Hartl.) Journ. f. Orn. 1869, p. 365
 (Costa Rica); Salvin, Ibis, 1870, p. 113; Sclat. § Salv. P. Z. S.
 1870, p. 214 (Veragua); Salv. Ibis, 1871, pp. 87, 90 (part.); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 21 (part.) (1873); Zeled. Pr. U.S. Nat. Mus. viii. p. 111 (1885).

Chrysotis farinosa, part., *Lawr. Ibis*, 1871, p. 249 (Costa Rica);
 Bouc. (nec Bodd.) P. Z. S. 1878, pp. 38, 46 (Costa Rica).

Similar to C. guatemalae, from which it differs in having the head green, with no distinct bluish tinge, of which there is only a trace on the forehead and lores: superciliary band green.

Hab. Costa Rica and Veragua.

a. Ad. sk.	Costa Rica.	Purchased.
b. ♀ ad. sk.	Costa Rica (Carmiol).	Sclater Coll.
c. ♀ ad. sk.	Angostura, Costa Rica, February (J. Carmiol).	Salvin-Godman Coll.
d. ♂ ad. sk.	Bugaba, Chiriqui (Arcé).	Salvin-Godman Coll. (Types of species.)
e. Ad. sk.	Chiriqui, Veragua (Arcé).	Salvin-Godman Coll.

## 8. Chrysotis farinosa.

Le Perroquet Meunier de Cavenne, D'Aubent. Pl. Enl. 861.

Le Meunier, Buff. Hist. Nat. Ois. vi. p. 225 (1779).

Mealy green Parrot, Lath. Syn. i. p. 291 (1781); id. Gen. Hist. ii. p. 247 (1822).

Psittacus farinosus, Bodd. Tabl. Pl. Enl. p. 52 (1783).

Psittacus pulverulentus, Gm. S. N. i. p. 341, n. 116 (1788); Lath. sittacus pulverulentus, Gm. 8. A. 1. p. 541, h. 110 (1760); Laun. Ind. Orn. i. p. 123, n. 120 (1790); Shaw, Gen. Zool. viii. p. 511 (1811); Bechst. Kwrze Ueb. p. 98 (1811-12); Vieill. N. D. xxv. p. 326 (1817); Kuhl, Consp. Psitt. p. 81 (1820); Wied, Reise, i. p. 258 (part.) (1820), ii. pp. 251, 252 (part.) (1821); Vieill. Enc. Méth. iii. p. 1373 (1823); Spix, Ar. Bras. i. p. 43 (1824); Steph. Gen. Zool. xiv. p. 106 (1826); Voigt, Cuv. Uebers. p. 741 (1831); Wagl. Mon. Psitt. p. 582 (1832); Wied, Beitr. iv. p. 231 (part.) (1832); Hartl. Sust. Vory. Ges. Mus. p. 87 (1844); Brehm. Mon. (1832); Hartl. Syst. Verz. Ges. Mus. p. 87 (1844); Brehm, Mon. d. Papag. t. 45; Burm. Syst. Ueb. ii. p. 182 (1856).

L'Amazone femelle, Levaill. Perr. pl. 85 (1805). Le Perroquet Meunier, Levaill. Perr. pl. 92 (1805). Amazona pulverulenta, Less. Tr. d'Orn. p. 189 (1831). Chrysotis pulverulentus, Sw. Class. B. ii. p. 301 (1837).

Chrysotis farinosus, G. R. Gr. Gen. B. ii. p. 422, n. 3 (1846). Psittacus ochrocephalus?, Cab. (nec Gm.) Schomb. Guian. iii. p. 724

(1848).

Chrysotis pulverulenta, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 85; Souancé, Rev. et Mag. de Zool. 1856, p. 153; Bp. Naumannia, 1856, Consp. Psitt. n. 78; Pelz. Verh. z.-b. Ges. Wien, 1865, p. 925 (var.); Sousa, Mus. Nac. Lisb. Psittaci, p. 10

(1869).

Chrysotis farinosa, G. R. Gr. List Psitt. Brit. Mus. p. 77 (1859); Finsch, Papag. ii. p. 565 (1868); G. R. Gr. Hand-list, ii. p. 163, n. 8310 (1870); Pelz. Orn. Bras. pp. 266, 448, liii (1871); Gieb. Thes. Orn. i. p. 682 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 23 (1873); Cab. Journ. f. Orn. 1874, p. 228; Rchnw. Vogelbild. t. xix. f. 1 (1878–83); Sclat. List Vert. An. 8th ed. p. 349 (1882); Salv. Ibis, 1886, p. 69.

Amazona farinosa, Schleg. Mus. P.-B. Psittaci, p. 52 (1864); id. op.

cit. Revue, p. 27 (1874).

Androglossa farinosa, Rchnw. Journ. f. Orn. 1881, p. 368 (Consp. Psitt. p. 208).

Chrysotis ochrocephala, Salv. (nec Gm.) Ibis, 1886, p. 69.

Adult male. Green; the upper parts with a mealy appearance; underparts lighter green, the under tail-coverts yellowish green, middle of the pileum yellow, often tinged with red; on the occiput a grey patch, more or less conspicuous; feathers of the occiput and hind ueck edged with black; carpal edge and wing-speculum red; first primary black, the remainder black, with the outer webs towards the base green, and with a blue tinge between the black and the green and at the tips; greater under wing-coverts and part of the inner webs of the quills below verditer-green; tail green, with a broad greenish-yellow band at the apical half; the outer web of the outer tail-feather more or less, but not always, slightly edged with blue: bill light horn-colour; feet blackish grey. Total length about 15 inches, wing 10, tail 5.9, bill 1.5, tarsus 0.85.

Female. Like the male.

Hab. Guiana, and apparently also Eastern Brazil.

Some specimens, probably younger birds, have very few yellow feathers on the crown.

a. Ad. sk. Surinam. Sclater Coll. b. Ad. sk. Riocour Coll. c. 3 ad. sk. Camacusa, Brit. Guiana, Oct. Salvin-Godman Coll. (H. Whitely).
Bartica Grove, Brit. Guiana, Salvin-Godman Coll.  $d, e. \ \exists \ \supseteq \ \mathrm{ad. \ sk.}$ September (H. Whitely). f. ♀ ad. sk. Zool. Soc. Coll. g. Skeleton. Zool. Soc. Coll. h. Skeleton.

## 9. Chrysotis inornata.

Psittacus pulverulentus, Lawr. (nec Gm.) Ann. Lyc. N. Y. viii. p. 11 (Panama) (1863).

? Psittacus amazonicus, var., Hahn, Orn. Atl., Papag. p. 54, t. 38

(1835)

Chrysotis farinosa, Sclat. (nec Bodd.) P. Z. S. 1858, p. 75 (Rio Napo);
G. R. Gr. List Psitt. Brit. Mus. p. 77, spec. a (1859); Sclat. & Salv.
P. Z. S. 1867, pp. 588, 595 (Rio Tocantins); Finsch, Papag. ii. p. 566 (part.) (1868); Pelz. Orn. Bras. pp. 266, 448, liii (part.?) (1871);
Lawr. Ibis, 1871, pp. 249, 250 (Panama); Salv. Ibis, 1871, p. 251;
Sclat. & Salv. P. Z. S. 1873, p. 300 (E. Peru); iid. Nomencl. Av.
Neotrop. p. 113, n. 23 (part.) (1873); Tacz. P. Z. S. 1874, p. 550

(Peru); Sclat. & Salv. P. Z. S. 1879, pp. 538 (Antioquia), 635 (Bolivia) (?); Berl. & Taez. P. Z. S. 1883, p. 573 (Ecuador); Tacz. Orn. Pér. iii. p. 220, Tabl. p. 100 (1886). Chrysotis, sp., Sclat. Cat. Am. B. p. 353, n. 2108 (Bogota) (1862). Chrysotis guatemalæ, part., Salv. Ibis, 1871, p. 98 (Panama).

Like C. farinosa, but larger, and without yellow spot on the vertex.

Hab. Panama, Colombia, Ecuador, Peru, Brazil, and perhaps also Bolivia.

a. Ad. sk. Veragua (Arcé). Salvin-Godman Coll. (Type of the species.) b, c, d. Ad. sk. Panama. Purchased. Vicinity of Bogota (Crowther). Salvin-Godman Coll. e. Ad. sk. f, y. Ad. sk. Bogota (Trübner). Remedios, U.S. of Colombia h. o ad. sk. Salvin-Godman Coll. (Salmon). Purchased. Remedios (Salmon). i. Ad. sk. k, l. Ad. sk. Sarayacu, Ecuador (Buckley). Salvin-Godman Coll. m. ♀ ad. sk. Chamicuros, May (E. Bartlett). Purchased. n. Ad. sk. Purchased. Amazons. Tocantins (Wallace). Sclater Coll. o. Ad. sk. p. Ad. sk. Para. Massena Coll. J. Gould, Esq. [P.]. S. America. q. Ad. sk. Zool. Soc. Coll. S. America. r. Ad. st. var.

#### 10. Chrysotis mercenaria.

Psittacus mercenarius, Tsch. Wiegm. Arch. 1844, 1, p. 303; id. Faun. Per. p. 270, t. xxvii. (1844); G. R. Gr. Gen. B. ii. p. 421, n. 29 (1846).

Chrysotis mercenarius, Licht. Nomencl. Av. p. 70 (1854).

Chrysotis mercenaria, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 10; id. Naumannia, 1856, Consp. Psitt. n. 85; Sclat. P. Z. Ś. 1858, 1d. Naumanna, 1850, Consp. Pstt. It. 85; Setat. P. Z. S. 1858, p. 75; G. R. Gr. List Psitt. Brit. Mus. p. 80 (1859); Selat. Cat. Am. B. p. 353, n. 2109 (1862); Finsch, Papag. ii. p. 594 (1868); G. R. Gr. Hand-list, ii. p. 164, n. 8322 (1870); Gieb. Thes. Orn. i. p. 683 (1872); Selat. & Salv. Nomencl. Av. Neotrop. p. 114, n. 30 (1873); Taez. P. Z. S. 1874, p. 550; Selat. & Salv. P. Z. S. 1879, pp. 538, 635; Selat. Ibis, 1881, p. 413; Taez. P. Z. S. 1882, p. 46; id. Orn. Pér. iii. p. 221, Tabl. p. 100 (1886).

Psittacus (Chrysotis) mercenarius, Verr. Rev. et Mag. de Zool. 1858, p. 513, pl. xvii. (young).

Amazona mercenaria, Schleg. Mus. P.-B. Psittaci, Revue, p. 28 (1874).

Chrysotis canipalliata, Cab. Journ. f. Orn. 1874, p. 105; Gieb. Thes. Orn. iii. p. 796 (1877); Sclat. Ibis, 1881, p. 412.

Androglossa mercenaria, Rehnw. Journ. f. Orn. 1881, p. 368 (Consp. Psitt. p. 208); id. Vogelbild. t. xxxii. f. 6 (1883).

Androglossa canipalliata, Rehnw. Journ. f. Orn. 1881, p. 369 (Consp. Psitt. p. 209); id. Vogelbild. Nachtr. 118 (1883).

Adult male. Green, feathers of the hind neek edged with black; forehead, cheeks, upper tail-coverts, and under surface lighter, but brighter green; carpal edge yellow, more or less tinged with red; a red speculum on the wing, formed by the red spots at the base of the outer webs of the three first secondaries; tips of the quills

black, more or less tinged with blue; central tail-feathers green, with the tips yellowish green, the lateral ones mostly red between the greenish-yellow tips and the green bases, but on the outer webs, between the red and the green portion, dark purple; the second and third tail-feathers with the inner webs red to the base, the outer one edged with blue on the outer web; lateral tail-feathers below green, with a reddish tinge showing through the greenish colour up to the greenish-yellow tips: bill dusky, with the base of the upper mandible yellowish; feet brown; "iris yellow" (Tschudi). Total length about 13.5 inches, wing 8.6, tail 3.9, bill 1.2, tarsus 0.7.

Young. No red wing-speculum. Hab. Peru, Ecuador, and Colombia.

Although I have considered the specimens without the red wingspeculum to be the young, they do not show any other sign of youth.

One specimen from Baisa, mentioned below, no doubt an individual variety, has a yellow tinge on the forehead.

	Purchased *. Salvin-Godman Coll.
var.	
d. Juv. sk. Ecuador.	Sclater Coll.
e. Ad. sk. Concordia, Antioquia (Salmon).	Sclater Coll.
f. Ad. sk. Bogota skin.	Massena Coll.
y. Imm. sk. New Granada.	Purchased.
h. Imm. sk. Colombia.	Purchased.

## 11. Chrysotis amazonica.

Ajuru-Curuca, Maregr. Hist. Bras. libr. ix. p. 205.

Psittacus jamaicensis icterocephalos, Briss. Orn. iv. p. 233 (1760) (var.).

Psittacus brasiliensis cyanocephalos, Briss. Orn. iv. p. 234 (1760)

(ex Ajuru-Curuca, Marcgr.).

Psittacus amazonicus, Briss. Orn. iv. p. 256 (1760); Linn. S. N. i. Reise, i. p. 239 (1820), ii. p. 339 (1821); Spix, Av. Bras. i. p. 45 (1824); Wagl. Mon. Psitt. p. 588 (excl. descr. av. pull.) (1832); Hartl. Syst. Verz. Ges. Mus. p. 87 (1844); Thienem. Fortpftanz. d. ges. Fög. p. 77, t. xiv. f. 12 (egg) (1846); Cab. in Schomb. Guinna, p. 725 (1848); Brehm, Mon. d. Papag. t. 49; Gulliv. P. Z. S. 1875, p. 489.

Psittacus Amazonicus fronte lutea, Briss. Orn. iv. p. 261 (1760).

Le Perroquet Amazone. D'Aubent. Pl. Enl. 547.

Le Perroquet Crik de Cayenne, D'Aubent. Pl. Enl. 839. L'Aouron-couraou, Euff. Hist. Nat. Ois. vi. p. 215 (1779).

Le Crik, Buff. Hist. Nat. Ois. vi. p. 228 (1779).

Common Amazone Parrot, var. A, Jamaica Parrot, Lath. Syn. i. p. 285 (1781); id. Gen. Hist. ii. p. 240 (1822) (var.).

Blue-topped Parrot, *Lath. Syn.* i. p. 286, var. C (1781). Brasilian yellow-fronted Parrot, *Lath. Syn.* i. p. 287, n. 91, var. E (1781).

<sup>\*</sup> Specimen figured by Verreaux (l, c,).

Yellow-shouldered Parrot, Lath. Syn. i. p. 288, n. 92 (1781); id. Gen. Hist. ii. p. 244 (1822).

Psittacus agilis, part., Gm. S. N. i. p. 330, n. 20 (1788).

Psittacus astivus, Gm. (nec Linn.) S. X. i. p. 340, n. 32 (1788);
Lath, Ind. Orn. i. p. 121 (part.) (1790); Bechst. Kurze Ueb. p. 95 (1811); Vieill. N. D. xxv. p. 319 (1817); Kuhl, Consp. Psitt. p. 75 (1820); Vieili, Enc. Meth. iii. p. 1369 (1823); Steph. Gen. Zool. xiv. p. 104 (1826); Cuv. Règne An. i. p. 464 (1829); Voigt. Cuv. Vebers, p. 740 (1831); Wied, Beitr, iv. p. 205 (1832); Hahn, Orn. Ath., Papag. p. 41, t. 26 (1835); ? Denny, P. Z. S. 1847, p. 38; Brehm, Mon. d. Papag. t. 49; Burm. Syst. Ueb. ii. p. 186 (1856).

Psittacus æstivus, var. 3, Gm. S. N. i. p. 340 (1788); Lath. Ind.

Orn. i. p. 121 (1790).

Psittacus æstivus, var. 8, Gm. S. N. i. p. 340 (1788); Lath. Ind. Orn. i. p. 121 (1790). Psittacus luteus, Gm. S. N. i. p. 341, n. 114 (1788); Bechst. Kurze

Veb. p. 98 (1811); Vieill. Enc. Méth. ii. p. 1370 (1823).

Psittaeus æstivus, var. ζ. Lath. Ind. Orn. i. p. 122 (1790). Psittaeus æstivus, var. η, Lath. Ind. Orn. i. p. 122 (1790).

Psittacus luteolus, Lath. Ind. Orn. i. p. 123, n. 118 (1790); Vieill. N. D. xxv. p. 321 (1817).

L'Amazone janne, Levaill. Perr. pl. 92 (1805).

Le Perroquet Aourou-couraou, Levaill. Perr. pls. 110 & 110 bis

Psittaeus aourou, Shaw, Gen. Zool. viii. p. 508, pl. 76 (1811).

Common Amazone Parrot, var. C. Lath. Gen. Hist. ii. p. 241 (1822). Common Amazone Parrot, vars. E & F. Lath. Gen. Hist. ii. p. 242 (1822).

? Yellow-cheeked Parrot, Lath. Gen. Hist. ii. p. 246 (1822).

Psittaeus amazonicus, var. ?, Hahn, Orn. Atl. p. 54, t. 38 (1835).

Psittaeus amazonius, Selby, Nat. Libr., Parr. p. 103 (1836). Chrysotis æstivus, Sw. Class. B. ii. p. 301 (1837); Brehm, Thierl.

iii. p. 28 (1866). Chrysotis amazonicus, G. R. Gr. Gen. B. ii, p. 422, n. 6 (syn.

emend.) (1846).

Chrysotis amazonica, Bp. Rev. et Mag. de Zool, 1854, p. 151, n. 94; Sonancé, Rev. et Mag. de Zool. 1856, p. 154; Bp. Naumannia, 1856, Consp. Psitt, n. 80 (excl. syn.); Sclat. P. Z. S. 1858, p. 75; G. R. Gr. List Psitt. Brit. Mus. p. 78 (1859); Sclat. Cat. Am. B. p. 352, n. 2103 (1862); Sclat. & Salv. P. Z. S. 1867, p. 753; Finsch, Papag. ii. p. 570 (1868); Sonsa, Mus. Nac. Lisb. Psittaci, Finsch, Papag, II. p. 570 (1808); Sousa, Mus. Mac. List. Psteaty, p. 11 (1809); Finsch, P. Z. S. 1870, p. 586; G. R. Gr. Hand-list, ii. p. 163, n. 8312 (1870); Pelz. Orn. Bras. pp. 226, 448, liii (1871); Gieb. Thes. Orn. i. p. 679 (1872); Sclat. & Salv. P. Z. S. 1873, p. 300; Sclat. & Salv. Nomencl. Av. Neotrop. p. 114, n. 25 (1873); Rehnw. Vogelbild. t, l. f. 6 (1878); Salv. & Godm. Ibis, 1880, p. 176; Tacz. P. Z. S. 1882, p. 45; Sclat. List Vert. An. Sth. of p. 210 (1883); Salv. Mis. 1880, p. 60, Tacz. Ovy. Phys. School and p. 210 (1883); Salv. Mis. 1880, p. 60, Tacz. Ovy. Phys. Rev. List. 1880, p. 60, Tacz. Ovy. Phys. Rev. Mis. 1880, p. 60, Tacz. Ovy. Phys. Rev. List. 1880, p. 60, Tacz. Ovy. Phys. Rev. Phys. 8th ed. p. 349 (1883): Salv. Ibis, 1886, p. 69; Tacz. Orn. Pér. iii. p. 223, Tabl. p. 100 (1886).

Psittacus amazonus, Schleg. Dierent. p. 65 (1864).

Amazona amazonica, Schleg. Mus. P.-B. Psittaci, p. 53 (1864); id. op. cit. Revue, p. 27 (1874).

† Chrysotis sp., Tayl. Ibis, 1864, p. 94 (Trinidad).

Psittacus agilis, Léotaud (nec Linn.), Ois. de l'île de la Trinidad, p. 327 (1886).

Androglossus amazonicus, Sund. Meth. nat. Av. disp. Tent. p. 69 (1872).

Androglossa amazonica, Rehnw. Journ. f. Orn. 1881, p. 377 (Consp. Psitt. p. 217).

Adult. Green, under surface paler; the feathers of the hind neck edged with blackish; forehead, lores, and superciliary stripes blue; vertex pale yellow; cheeks deep yellow; ear-coverts grassgreen; outer webs of the upper tail-coverts and under tail-coverts yellowish green; metacarpal edge yellowish green; bastard-wing and primary-coverts green, the first tipped with blue; wing-speculum orange-red; first primary black, the remainder black, with the base of the outer webs green; between the green base and the black apical part there is a deep blue tinge, which is very conspicuous at the tip of the secondaries; smaller under wing-coverts green, like the underparts; greater under wing-coverts and inner webs of the quills below green; tail green, with the tip yellow-green; the lateral tail-feathers have the inner web, except at the tip, orangered, erossed by a green band: the outer tail-feather has the middle part of the outer web blue; bill light horn-colour, with the tip dusky; feet dusky; iris red-orange. Total length about 13.5 inches, wing 7.8, tail 4.1, bill 1.35, tarsus 0.65.

Female. Like the male.

Hab. Guiana, Venezuela, Tripidad, Colombia, and Amazonia.

a. Ad. sk. b. Ad. sk.	S. America.	Sclater Coll. Purchased.
c. Ad. sk.	Guiana (Eyton Coll.).	Purchased.
d. d ad. sk.	Roraima, Brit. Guiana, January (H. Whitely).	Salvin-Godman Coll.
e. d ad. sk.	Camacusa, Brit. Guiana, April (H. Whitely).	Salvin-Godman Coll.
f. 9 ad. sk.	Takutu R., Brit. Guiana, March (H. Whitely).	Salvin-Godman Coll.
g. Ad. sk.	Venezuela.	Salvin-Godman Coll.
h. Ad. sk.	Trinidad.	Zool, Soc. Coll.
i. Ad. st.	Bogota.	Purchased.
k. Ad. sk.	Vicinity of Bogota (Crowther).	Salvin-Godman Coll.
l. 3 ad. sk.	Arihueca, U. S. of Colombia, March (F. A. A. Simons).	Salvin-Godman Coll.
m. Ad. sk.	Rio Napo, Ecuador.	Sclater Coll.
n, o. Ad. sk.	Sarayacu, Ecuador (Buckley).	Salvin-Godman Coll.
p. d ad. sk.	Chamicuros, Peruvian Amazons, September.	E. Bartlett, Esq.
q. ♂ ad. sk.	Chamicuros, Peruvian Amazons, September (E. Bartlett).	
r, s. ♂♀ ad. sk.	Chayavetas, Peruvian Amazons, August.	E. Bartlett, Esq. [C.].

## 12. Chrysotis æstiva.

The Great Green Parrot from the West Indies, Edw. Birds, iv. pl. 162 (var.) (1751).

Psittacus viridis major occidentalis, Edw. Birds, iv. p. 246 (var.) (1751).

Psittaeus amazonicus jamaieensis, Briss. Orn. iv. p. 276 (1760).

Psittacus amazonicus varius, Briss. Orn. iv. p. 281, t. xxvi. f. 2 (var.) (1760).

Psittacus æstivus, Linn. S. N. i. p. 146, n. 32 (var.) (1766); Spix, Av. Bras. i. p. 44 (with vars. 1-4) (1824); ? Less. Tr. d'Orn. p. 193 (1831).

Perroquet Amazone varié du Brésil, D'Aubent. Pl. Enl. 120.

Perroquet tapiré, Buff. Hist. Nat. Ois. vi. p. 236, pl. 11 (1779). Common Amazons Parrot, Lath. Syn. i. p. 284, n. 91 (syn. fals.) (1781); id. Gen. Hist. ii. p. 240, with var. B (1822).

Common Amazons Parrot, var. B, Main Parrot, Lath. Syn. i. p. 285 (1781).

Common Amazous Parrot, var. D. West Indian green Parrot, Lath. Syn. i. p. 287 (1781).

Counterfeit Parrot, Lath. Syn. i. p. 295 (1781).

Psittacus guttatus, Bodd. Tabl. Pl. Enl. p. 8 (1783).

Psittacus æstivus, var.  $\epsilon$ , Gm. S. N. i. p. 340 (1788); Lath. Ind.

Orn. i. p. 122 (with var. ι, p. 123) (1790).
Psittacus æstivus, var. γ, Gm. S. N. i. p. 340 (1788); Lath. Ind. Orn. i. p. 121 (1790).

Loro cabeza amarilla, Azara, Apunt. i. p. 440, n. 285 (1803) (fide Salv. Ibis, 1880, p. 351); id. Voy. (ed. Sonn.) iii. p. 72 (1809).

Psittacus decorus, Herm. Obs. Zool. p. 126 (1804). L'Amazone mâle, Levaill. Perr. pl. 84 (1805).

L'Amazone à calotte bleue. Levaill. Perr. pl. 87 (1805).

L'Amazone tapiré en jaune, Levaill. Perr. pl. 89 (var.) (1805).
Psittaeus amazonicus. part., Shaw, Gen. Zool. viii. 2, p. 493 (1811);
Kuhl, Consp. p. 74 (1820); Wied (nec Linn.), Reise, ii. p. 198 (1821); Cw. Règn. An. i. p. 464 (1829); Voigt. Cw. Uebers. (1821): Cat. Atyas. Tr. d Orn. p. 195 (1831); Wied, Beitr. iv. p. 213 (1832); Hahn, Orn. Atl., Papag. p. 31, t. 16 (1834); Thienem. Fortyplanz. d. ges. Vög. p. 77, t. xiv. f. 11 (egg) (1846); Brehm, Mon. d. Papag. t. 50; Burm. Syst. Ueb. ii. p. 187 (1856); id. Reise La Plata-Staaten. ii. p. 443 (1861).

Psittacus ochrocephalus, Bechst. (nec Gm.) Kurze Ueb. p. 96 (1811);
Wagl. Mon. Psitt. p. 584 (1832); Hartl. Ind. Azara's Apunt. p. 18 (1847).

Common Amazons Parrot, vars. D & H, Lath. Gen. Hist. ii. p. 241 (1822).

? Amazona icterocephala, Less. Tr. d'Orn. p. 190 (1831).

Psittacus ochrocephalus, var. a. Wagl. Mon. Psitt. p. 586 (1832).

Psittacus amazonicus, var., Halm, Orn. Atl. t. 43 (1836).

Chrysotis amazonicus, Sw. (nec Linn.) Class. B. i. p. 301 (1837);
Brehm, Thierleb. iii. p. 28 (1866).

Chrysotis ochrocephala, part., G. R. Gr. Gen. B. ii. p. 422, u. 2 (1846).

Chrysotis æstiva, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 105; G. R. Gr. List Psitt. Brit. Mus. p. 78 (1859); Sclat. Cat. Am. B. p. 353, n. 2106 (1862); Finsch, Papag. ii. p. 588 (1868): Sousa, Mus. Nac. Lisb. Psittaci, p. 11 (1869); G. R. Gr. Hand-list, ii. p. 153, n. 8315 (1870); Petz. Orn. Bras. pp. 267, 448, liii (1871); Gieb. Thes. Orn. i. p. 679 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 114, n. 29 (1873); Rchnw. Vogelbild. t, 1. f. 7 (1878); Salv. This, 1880, p. 361; Forbes, Ilis, 1881, pp. 319, 352; Salv. Cat. B. Strickl. Coll. p. 467 (1882); Sclat. List Vert. An. 8th ed. p. 349 (1883); Berl. Journ. f. Orn. 1885, p. 122; Sclat. Argent. Orn. ii. p. 47 (1889).

Chrysotis jamaicensis, G. R. Gr. List Psitt. Brit. Mus. p. 78 (1859);

id. Hand-list, ii. p. 163, n. 8313 (1870).

Amazona æstiva, part., Schleg. Mus. P.-B. Psittaci, p. 54, nos. 1, 2, 3, & 4 (var.) (1864); id. op. cit. Revue, p. 27, ind. nos. 11 & 12

1874).

Androglossus æstivus, Sund. Meth. nat. Av. disp. Tent. p. 69 (1872). Androglossa æstiva, Rehnw. Journ. f. Orn. 1881, p. 377 (Consp. Psitt. p. 217).

Chrysotis amazonica, White (nec Linn.), P. Z. S. 1882, p. 621 (?).

## Variety entirely yellow (albinism).

Psittacus luteus, *Briss. Orn.* iv. p. 306 (var.) (1760); *Bodd. Tubl. Pl. Enl.* p. 2 (1783).

Perroquet jaune, D'Aubent. Pl. Enl. 13 (var.).

Psittacus aurora, Linn. Mant. p. 524 (var.) (1771); Gm. S. N. i. p. 342, n. 50 (1788); Lath. Ind. Orn. i. p. 127, n. 133 (1790); Shaw, Gen. Zool. viii. 2, p. 502 (1811); Bechst. Kwze Ueb. p. 96 (1811–12); Vieill. N. D. xxv. p. 321, pl. 10. f. 1 (1817); id. Enc. Méth. iii. p. 1370 (1823).

Aurora Parrot, Lath. Syn. i. p. 301, n. 106 (var.) (1781); id. Gen.

Hist. ii. p. 255 (1822).

Psittaeus ochrocephalus, var.  $\beta$ , Wagl. Mon. Psitt. p. 586 (1832). Chrysotis æstiva, Pelz. Verh. z.-b. Ges. Wien, 1865, p. 925 (var.).

Adult. Green, the feathers edged more or less with black; under surface lighter green; forehead and lores blue; vertex, periophthalmic region, anterior part of the cheeks, threat, and thighs yellow; bend of the wing red, in some specimens more or less mixed with yellow; first primary black, the remainder black with the outer webs green at the base, blue at the apical portion; secondaries blue at the tips, the first five with the outer webs, except at the tip, red, showing a very large red speculum; metacarpal edge yellowish green; under wing-coverts green; the greater ones and inner webs of the quills below verditer-green; tail green, with a broad yellow-green band at the tip of the lateral feathers, which have the bases of the inner webs red, separated by a green band from the yellow-green apical portion; the outer web of the outer tail-feathers in some specimens edged with blue: bill and feet blackish brown; iris orange-yellow. Total length from 14 to 15 inches, wing 9-8, tail 5-4.5, bill 1.3, tarsus 0.7.

Female. Like the male.

Young. Has no yellow on the head, and no blue band on the forehead, the whole head being green.

Hab. Southern and Central Brazil, Paraguay and Argentine

Republic.

There is a good deal of individual variation in this bird: in some specimens, apparently adult, the yellow colour of the sides of the head extends only a little under the eyes, so that the lower part of the cheeks is green; in others the upper part of the cheeks, near the gape, is blue like the forchead and lores; also as regards the bend of the wing the variation in colour is very great, this part in some being red, in others red and yellow, or mostly yellow.

α, b. Ad. st.c. Ad. sk.

S. America. S. America. Purchased. Zool, Soc. Coll.

Zool. Soc. Coll. d. ♂ ad. sk. S. America. Sclater Coll. e. Ad. sk. Brazil. f. Ad. sk. Brazil. Purchased. q. Ad. sk. Pernambuco, Brazil (W. A. Salvin-Godman Coll. Forbes). h. o juv. sk. Pelotas, Rio Grande do Sul, Salvin-Godman Coll. Brazil (Joyner). i. Juv. sk. Pidia Blanca, Bolivia, April Salvin-Godman Coll. (H. H. Smith). k. Ad. sk. Paraguay. Sclater Coll. H. Durnford, Esq. Salta, Argentine Republic, l. 3 ad. sk. [C.]. Mrs. Fletcher [P.]. June. m. Ad. sk. [Jamaica.] (Type of C. jamaicensis, Gr.)

#### 13. Chrysotis ochroptera.

Psittacus barbadensis, Briss. Orn. iv. p. 236 (1760); Gm. S. N. i. p. 339, n. 113 (1788); Lath. Ind. Orn. i. p. 120, n. 115 (1790). Psittacus Amazonicus gutture luteo, Briss. Orn. iv. p. 287 (1760). ? Psittacus carolineusis, Scop. (nec Linn.) Ann. I. Hist. Nat. p. 29 Ash-fronted Parrot, Lath. Syn. i. p. 284, n. 90 (1781); id. Gen. Hist.

ii. p. 238 (1822).

Yellow-winged Parrot, Lath. Syn. i. p. 289, n. 93 (1781); id. Gen.

Hist. ii. p. 244 (with vars. A, B?) (1822). Psittaeus ochropterus, Gm. S. N. i. p. 341, n. 115 (1788); Lath. Ind. Orn. i. p. 123, n. 119 (1790); Béchst. Kurze Ueb. p. 97 (1811-12); Vieill. N. D. xxv. p. 327 (1817); id. Enc. Méth. iii. p. 1374 (1823); Brehm, Mon. d. Papag. t. 70 (1855).

Le Perroquet à epaulettes jaunes, Levaill. Perr. pls. 98, 98 bis (1805). Psittacus amazonicus, part., Kuhl, Consp. Psitt. p. 74 (1820).

? Amazona icterocephala, part., Less. Tr. d'Orn. p. 190 (1831).
Psittacus xanthops, vars. a & β, Wagl. Mon. Psitt. p. 584 (1832).

Psittacus amazonicus, juv., Hahn, Orn. Atl. t. 45 (1836). Chrysotis ochropterus, Sw. Class. B. ii. p. 301 (1837); G. R. Gr. Gen.

B. ii, p. 422, n. 4 (part.) (1846). Chrysotis zanthocephalus, Sw. Class. B. ii. p. 301 (1837) (ex Levaill.

pl. 98 bis).

Chrysotis ochroptera, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 90; Souancé, Rev. et Mag. de Zool. 1856, p. 153; Bp. Naumannia, 1856, Consp. Psitt. n. 87; G. R. Gr. List Psitt. Brit. Mus. p. 79 (1859); Finsch, Papag. ii. p. 577 (1868); Sousa, Mus. Nac. List. Psittaci, p. 11 (1869); G. R. Gr. Hand-list, ii. p. 164, n. 8316 (1870); Pelz. Orn. Bras. p. 266 (note) (1871); Gieb. Thes. Orn. i. p. 683 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 114, n. 26 (1873); Rehnw. Vogelbild. t. i. f. 5 (1878); Sclat. List Vert. An. 8th ed. p. 350 (1883).

Amazona æstiva, part., Schleg. Mus. P.-B. Psittaci, p. 54, ind. nos. 5, 6 (1864); id. op. cit. p. 27, ind. n. 13 (1874).

Chrysotis lactifrons, Lawr. Ann. N. Y. Acad. Sc. i. p. 125 (1878);

Sclat. Ibis, 1881, p. 412.

Androglossa ochroptera, Rchnw. Journ. f. Orn. 1881, p. 378 (Consp. Psitt. p. 218).

Adult male. Green, the edges of the feathers black; underparts lighter green; forehead and lores whitish; vertex, sides of the head, ehin, bend of the wing, and thighs yellow; eubital edge also yellow, more or less mixed with red; upper and under tail-coverts light green; wing-speeulum red; bastard-wing and primary-coverts green; primaries black, with the outer webs green on the basal half; secondaries broadly tipped with blue; metacarpal edge green or yellowish green; smaller under wing-coverts green, the greater ones and inner webs of the quills verditer-blue; tail green, with a broad yellow-green apical band; the lateral tail-feathers red at the base, and with a green band on the inner webs between the yellow-green apical portion and the red bases; the outer tail-feather with the outer web blue, deeper towards the base, paler towards the tip: bill whitish horn-colour; feet pale; iris orange. Total length about 13.5 inches, wing 8.6, tail 5, bill 1.2, tarsus 0.6.

Female. Probably like the male. Hab. Venezuela and Trinidad?

Some specimens have the lower part of the cheeks green, washed with blue.

Dr. Finsch mentions a specimen sent to the Berlin Museum from Caracas; I suppose that this is Messrs. Sclater and Salvin's authority for stating that the bird lives in Venezuela.

a. Ad. st.S. America.Purchased.b. Ad. st.S. America.Massena Coll.c. d ad. sk.S. America (Zool. Soc.).Sclater Coll.

d, e. of ad. sk. S. America. Zoological Society's Coll.

## 14. Chrysotis ochrocephala.

Psittacus Amazonicus poikilorhynchos, Briss. Orn. iv. p. 270 (1760) (ex Aldr.).

Psittacus Amazonicus brasiliensis, *Briss. Orn.* iv. p. 272, t. xxvi. f. 1 (1760).

Perroquet verd et rouge de Cayenne, D'Aubent. Pl. Enl. n. 312.
Psittacus cajenneus, Müll. S. N. Suppl. p. 78 (nec p. 81) (1776);
Cass. Pr. Ac. Nat. Sc. Philad. 1864, p. 240.

? Amazone à tête jaune, var. 1, Buff. Hist. Nat. Ois. vi. p. 209 (1779).

Yellow-headed Amazons Parrot, Lath. Syn. i. p. 282, n. 89 (1781);
id. Gen. Hist. ii, p. 237 (1822).

? Yellow-headed Amazons Parrot, var. A, Yellow-crowned Parrot, Lath. Syn. i. p. 282 (1781); id. Gen. Hist. ii. p. 237 (1822).

Parti-billed Parrot, Lath. Syn. i. p. 283 (1781); id. Gen. Hist. ii. p. 238 (1822).

Psittacus ochrocephalus, Gm. S. N. i. p. 339, n. 112 (with vars. β & γ) (1788); Vieill. N. D. xxv. p. 324 (part.) (1817); Hahn, Vög. aus. As. etc. Lief. xvi. t. 1 (1822); Vieill. Enc. Méth. iii. p. 1372 (part.) (1823); ? Wagl. Mon. Psitt. p. 586 (juv.) (1832); Moritz, Wiegm. Arch. 1837, i. p. 581; Hartl. Syst. Verz. Ges. Mus. p. 87 (1844); ? Cab. in Schomb. Guiana, iii. p. 724 (1848) Cass. in Gillis, Un. St. Nav. Exp. ii. p. 189, pl. 22 (1855); Schleg. Dierent. p. 65 (1864).

Psittacus amazonicus, *Lath.* (nec Linn.) Ind. Orn. i. pp. 119, 120, n. 114 (with vars. β & γ) (1790); *Kuhl*, Consp. Psitt. p. 74 (part.) (1820).

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Psittacus flavifrons, Herm. Obs. Zool. p. 126 (1804). Psittacus poikilorhynchos, Shaw, Gen. Zool. viii. 2, p. 491 (1811). ? Amazona icterocephala, var., Less. Tr. d'Orn. p. 190 (1831). Psittacus pœcilorhynchus, Wagl. Mon. Psitt. p. 581 (1832).

Chrysotis peecilorhynchus, G. R. Gr. Gen. B. ii. p. 422, n. 2 (1846);

Sclat. Cat. Am. B. p. 352, n. 2104 (1862).

Chrysotis ochrocephala, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 92; ? Sonancé, Rev. et Mag. de Zool. 1856, p. 154; Bp. Naumannia, 1856, Consp. Psitt. n. 82; G. R. Gr. List Psitt. Brit. Mus. p. 78 (1859); Finsch, Papag. ii. p. 584 (1868); G. R. Gr. Hand-list, ii. p. 163, n. 8314 (1870); Finsch, P. Z. S. 1871, p. 586; Lawr, Wis 1871, p. 251, Poly Com Press, p. 2017, 448. p. 586; Lawr. Ibis, 1871, p. 251; Pelz. Orn. Bras. pp. 267, 448, 1iii (1871); Gieb. Thes. Orn. i. p. 683 (1872); Selat. § Salv. Nomencl. Av. Neotr. p. 114, n. 28 (part.) (1873); Garrod, P. Z. S. 1873, pp. 466, 634, 1874, p. 587, 1875, p. 343; Tacz. § Berl. P. Z. S. 1885, pp. 109, 114; Salv. Ibis, 1886, p. 69; Tacz. Orn. Pév. iii. p. 224, Tabl. p. 100 (1886).

Chrysotis pœcilorhyncha, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 95; Souancé, Rev. et Mag. de Zool. 1856, p. 154; Bp. Naumannia, 1856, Consp. Psitt. n. 81; Souancé, Icon. Perr. pl. xxviii. (1857); Sclat. & Salv. P. Z. S. 1866, p. 567; Sousa, Mus. Nac. Lisb. Psittaci, p. 11 (1869); Sclat. & Salv. P. Z. S. 1873, p. 300.

Amazona æstiva, part., Schleg. Mus. P.-B. Psittaci, p. 54, ind. n. 7 (var.), 8, 9 (1864); id. op. cit. Revue, p. 27 (part.) (1874).

Androglossa ochrocephala, Rchnw. Journ. f. Orn. 1881, p. 378 (Consp. Psitt. p. 218); id. Vogelbild. t. xxxii. f. 9 (1883). Chrysotis mercenaria, Sclat. (nec Tschudi) P. Z. S. 1882, p. 789; id.

List Vert. An. 8th ed. p. 350 (1883).

Adult. Green, upper tail-coverts and under surface yellowish green, the feathers with narrow blackish edges; crown jonguilleyellow; frontal edge pale glaucous-green; hairy feathers round the nostrils black; bend of the wing and wing-speculum red; metacarpal edge vellow-green, sometimes with red marks on the lower part; first primary black; the remaining primaries also black, but with the outer webs deep blue on the apical half and green on the basal one: secondaries with blue tips; tail green, with a broad yellow-green band at the tip, narrower on the two central tail-feathers, the lateral ones with a red spot at the base and a green band across the middle of the inner webs: bill blackish, with the base of the upper mandible flesh-colour; feet dark grey; iris red, with an inner vellow ring. Total length about 14.5 inches, wing 8.5, tail 5, bill 1.35, tarsus 0.7.

Young. Yellow colour of the crown more restricted or entirely wanting, and less red on the bend of the wing, where sometimes it is completely absent.

Hab. Venezuela and Trinidad, Colombia, Ecuador, and Eastern

Peru.

Taczanowski mentions a specimen, from unrecorded locality, having the whole forehead and the anterior part of the lores yellow, which colour extends on the pileum only as far as the eyes and not to the occiput (?), the wing-speculum larger, and the plumage yellowish green. The last specimen in the following list seems to resemble the one mentioned by Taczanowski, only it has also the anterior part of the cheeks, near the base of the lower mandible, yellow.

a. Ad. sk.		Zool. Society.
b. Ad. st.	Brazil.	Massena Coll.
c. Ad. sk.	Vicinity of Bogota (Crow-ther).	Salvin-Godman Coll.
d. Ad. sk.	Bogota.	Purchased.
e. Ad. sk.	Sarayacu, Ecuador (Buckley).	Salvin-Godman Coll.
f. Ad. sk.	Balzar Mountains, W. Ecuador	Salvin-Godman Coll.
	(Illingworth).	
g, h. Ad. sk.	Trinidad.	Purchased.
i. Ad. sk.	Trinidad.	Zool. Society.
k. Ad. sk.	Venezuela.	Salvin-Godman Coll.
l. ♀ ad. sk.	[Guiana.]	Zool. Society.
m. 2 ad. sk., var.	Colombia ?	Zool. Society.
n. Ad. sk., var.	S. America?	Sclater Coll.

## 15. Chrysotis panamensis.

Chrysotis ochrocephala, Salv. (nec Gm.) Ibis, 1871, pp. 87, 99 (Chiriqui); Lawr. Ibis, 1871, p. 251; Sclat. & Salv. Nomencl. Av. Neotrop. p. 114, n. 28 (part.) (1873); Sclat. P. Z. S. 1880, p. 706. Chrysotis panamensis, Cab. Jown. f. Orn. 1874, p. 349; Sclat. Ibis, 1881, p. 413; id. List Vert. An. 8th ed. p. 350 (1883). Androglossa panamensis, Rehnw. Jown. f. Orn. 1881, p. 378 (Consp. William).

Psitt. p. 218); id. Vogelbild. in the text of t. xxxii. f. 9 (1883).

Adult. Very much like C. ochrocephala, but smaller, and with the yellow of the head confined to the sinciput and extended to the frontal edge, where is no glaucous-green colour; the hairy feathers round the nostrils are partially golden; the vertex is tinged with glaucous-green, and the thighs are yellow; bill yellowish, with the tip lead-colour. Total length about 12 inches, wing 8, tail 4, bill 1 3, tarsus 0.65.

Hab. Panama, Veragua, and Colombia.

o. Skeleton.

a. Ad. sk.	Chitra, Veragua (Arcé).	Salvin-Godman Coll.
b. Ad. sk.	Panama,	Sclater Coll.
c, d. Ad. sk.	Panama.	Purchased.
e. Ad. sk.	Panama.	Purchased.
f. of ad. sk.	Panama.	Zool. Society.
g. Ad. sk.	Bogota.	Sclater Coll.
h. Ad. sk.	Bogota.	Purchased.

## 16. Chrysotis auropalliata.

Psittacus (Amazona) auro-palliatus, Less. Rev. Zool. 1842, p. 135. Psittacus flavinuchus, Gould, P. Z. S. 1843, p. 104; id. Voy. of 'Sulphur, p. 45, pl. 27 (1844); id. Ann. & Mag. N. H. xiii. p. 475 (1844). Psittacus auro-palliatus, G. R. Gr. Gen. B. ii. p. 421, n. 31 (1846). Chrysotis flavinuchus, G. R. Gr. Gen. B. ii. p. 422, n. 7 (1846). Amazona auropalliatus, Less. Descr. Mamm. et Ois. p. 196 (1847). Chrysotis auripalliata, Bp. Compt. Rend. xxxvii. 2, p. 807 (1853); id. Not. Coll. Delattre, p. 2 (1854); id. Rev. et Mag. de Zool.

1854, p. 151, n. 97; Souancé, Rev. et May. de Zool. 1856, p. 154; Bp. Naumannia, 1856, Consp. Psitt. n. 79; Souancé, Icon. Perr. pl. xxvii. (1857); Taylor, Ibis, 1860, p. 121 (Tigre Is.); Finsch, Papag. ii. p. 568 (1868); Salv. Ibis, 1871, pp. 87, 99; Lawr. Ibis, 1871, p. 251; Gieb. Thes. Orn. i. p. 680 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 114, n. 24 (1873); Cab. Journ. f. Orn. 1874, pp. 105, 106; Nutting, Pr. U.S. Nat. Mus. v. p. 402 (1882); Salv. Cat. B. Strickl. Coll. p. 467 (1882); Sclat. List Vert. An. 8th ed. p. 349 (1883); Nutting, Pr. U.S. Nat. Mus. vi. p. 377 (1883); Zeled. Pr. U.S. Nat. Mus. viii. p. 111 (1885); Salv. Ibis, 1889, p. 373 (Ruatan Is.).

Chrysotis auripalliatus, Sclat. & Salv. Ibis, 1859, p. 138; Salv. Ibis,

1890, p. 88.

Chrysotis occipitalis, Verr. MS., Bp. Rev. et Mag. de Zool. 1854,

p. 151, n. 93.

Chrysotis auropalliata, G. R. Gr. List Psitt. Brit. Mus. p. 77 (1859); id. Hand-list, ii. p. 163, n. 8311 (1870); Lawr. Bull. U.S. Nat. Mus. n. 4, p. 36 (1875).

Amazona auripalliata, Schleg. Mus. P.-B. Psittaci, p. 52 (1864); id. op. cit. Revue, p. 27 (1874).

Chrysotis auropalliatus, Frantz. Journ. f. Orn. 1869, p. 365.

Androglossa auripalliata, Rehnw. Journ. f. Orn. 1881, p. 368 (Consp. Psitt. p. 208); id. Vogelbild. Nachtr. 119 (1883).

Adult. Green, head, upper tail-coverts, and underparts much lighter; hairy feathers round the nostrils black; hind neck, and often also a patch on the middle of the sinciput, yellow; edge and bend of the wing more or less with red feathers; wing-speculum at the base of the outer webs of the first four secondaries red; first primary black; the remaining primaries black, with the base of the outer webs green, apical portion of their outer webs and tips of secondaries deep blue; greater under wing-coverts and inner webs of the quills below verditer-green; tail green, with the apical half greenish yellow, the lateral feathers with the base of the inner webs red, the outer feather with the outer web towards the base edged with blue: bill pale horn-grey, with the base of the upper mandible horn-yellowish; cere black; feet dusky; iris yellow-brown or "orange-red" (Sumichrast). Total length about 14 inches, wing 9, tail 4.7, bill 1.5, tarsus 0.8.

Young. Wants the yellow collar on the hind neck.

Hab. Western side of Central America, from Guatamela to Costa Rica and Tigre and Ruatan Islands in the Bay of Honduras.

De Souancé mentions this bird from Acapulco.

a. Ad. sk.	C. America.	Purchased.
b. Ad. sk.	[Guayaquil.]	Massena Coll.
c. ♂ ad. sk.	Huamuchal, Guatamela, Feb.	Salvin-Godman Coll.
	(O. Salvin).	
d. Ad. sk., var.	Retaluleu, Guatamela (O.	Salvin-Godman Coll.
· · · · · · · · · · · · · · · · · · ·	Salvin).	
e. Ad. sk.	San Salvador.	Purchased.
f-i. Ad.; $k$ .	Ruatan Island, Bay of	Salvin-Godman Coll.
Imm. sk.	Honduras (G. F. Gaumer).	

## 17. Chrysotis levaillanti.

Perroquet à tête jaune, Levall. Perr. pl. 86 (1805).

Psittacus amazonicus, part., Kuhl, Consp. Psitt. p. 104 (1820).

Common Amazons Parrot, var. G, Lath. Gen. Hist. ii. p. 243 (1822).
 Psittacus ochrocephalus, Licht. (nec Gm.) Verz. Säugeth. etc. Mexico,
 p. 1 (1830); id. Journ. f. Orn. 1863, p. 54.

p. 1 (1830); id. Journ. f. Orn. 1863, p. 54. Psittacus xanthops, Wagl. (nec Spix) Mon. Psitt. p. 583 (excl. var. a & β) (1832); Hartl. Syst. Verz. Ges. Mus. p. 87 (1844); Burm.

Syst. Ueb. ii. p. 188 (syn. emend.) (1856).

Chrysotis ochropterus, part., G. R. Gr. Gen. B. ii. p. 422, n. 4 (1846). Chrysotis xanthops, Sovancé (nec Spix), Rev. et May. de Zool. 1856, p. 153; Bp. Naumannia, 1856, Consp. Psitt. n. 88; Taylor, Ibis, 1860, p. 317 (Yojoa).

Chrysotis ochroptera, Sclat. (nec Gm.) P. Z. S. 1837, p. 230, 1859,

p. 389 (Rio Grande).

Chrysotis levaillantii, G. R. Gr. (nec Amazona levaillanti, Less.), List Psitt. Brit. Mus. p. 79 (1859); Sclut. Cat. Am. B. p. 353, n. 2105 (1862); Salv. Ibis, 1866, p. 195 (Belize, Yucatan); Finsch, Papag. ii. p. 580 (1868); Sousa, Mus. Nac. Lisb. Psittaci, p. 11 (1869); G. R. Gr. Hand-list, ii. p. 164, n. 8318 (1870); Salv. Ibis, 1871, pp. 87, 100; Lawr. Pr. Bost. Soc. Nat. Hist. xiv. p. 271 (1871); id. Ibis, 1871, p. 250; Pelz. Orn. Bras. p. 266 (note) (1871); Gieb. Thes. Orn. i. p. 682 (1872); Selat. & Salv. Nomencl. Ar. Neotrop. p. 114, n. 27 (1873); Garrod, P. Z. S. 1873, pp. 466, 634, 1874, p. 587; Lawr. Mem. Bost. Soc. Nat. Hist. ii. p. 296 (1874); id. Bull. U.S. Nat. Mus. n. 4, p. 36 (1875); Rehnw. Vogelbild. t. i. f. 4 (1878); Sclat. List Vert. An. 8th ed. p. 350 (1883); Salv. & Godm. Ibis, 1889, p. 241.

Amazona æstiva, part., Schleg. Mus. P.-B. Psittaci, p. 54, ind. n. 10

(1864); id. op. cit. Revue, p. 27 (1874).

Psittacus leucorhynchus, Natt. in Mus. Vindob., fide Finsch, Papag. ii. p. 582 (1868).

Androglossa levaillanti, Rehnw. Journ. f. Orn. 1881, p. 379 (Consp. Psitt. p. 219).

Amazona oratrix, Ridgw. Man. N. Am. Birds, p. 587 (1887).

Adult male. Green, underparts paler, with a slight bluish tinge: upper tail-coverts yellowish green; head and neck yellow, the first paler; metacarpal edge and thighs also yellow; bend of the wing red. more or less mixed with yellow; wing-speculum red; bastard-wing and primary-coverts green with a slight bluish tinge; first primary black, the remainder also black, but with the bases of the outer webs green; secondaries green, with the tips black, and tinged with blue on the outer webs near the black tips; smaller under wingcoverts pale green like the underparts; greater under wing-coverts and inner webs of the quills below green; tail green, with a bread green-yellow band at the tip, and with the bases of the lateral tailfeathers red, the outer web of the outer feather edged with blue; tail below red at the base, green in the middle, and yellow-green at the tip: bill whitish; feet pale brown; iris red, with an inner ring yellow. Total length 15 inches, wing 9.7, tail 5.5, bill 1.55, tarsus 0.75.

Female. Like the male.

Birds not fully adult have less yellow on the head, where occiput and cheeks are green, like the neck; the metacarpal edge is vellowish green.

Hab. Mexico, from Nuevo Leon on the east and Mazatlan and Tres Marias on the west to Tehuantepec, Yucatan, and Honduras.

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<ul><li>a. Ad. st.</li><li>b. Ad. st.</li></ul>	[S. America.] [S. America.]	Purchased. Mrs. Leigh Sotherby.
		(Types of the species.)
c. Ad. st.	[S. America.]	Massena Coll.
d, e. ♂♀ ad. sk.	Tres Marias Is., W. Mexico, March, April (A. Forrer).	Salvin-Godman Coll.
f. ♀ ad. sk.	Mexico.	Salvin-Godman Coll.
g. Ad. sk.	Mexico (Sallé).	Sclater Coll.
h. Ad. sk.	Mexico.	Sallé [C.].
<i>i, k, l.</i> ♂ ad. sk.	Villa Grande, N. Leon, Mexico, May (J. B. Armstrong).	Salvin-Godman Coll.
m, n. & ad. sk.	Sierra Madre, above Ciudad Victoria, Tamanlipas, Mexico (W. B. Richard- son).	Salvin-Godman Coll.
o-w. ♂♀ad. sk.	Aldama, Tamaulipas, Mexico, March (W. B. Richardson).	Salvin-Godman Coll.
x. d imm. sk.	Tampico, Mexico, Feb. (W. B. Richardson).	Salvin-Godman Coll.
y. 3 ad. sk.	Alvarado, Mexico, December (F. Ferrari-Perez).	Salvin-Godman Coll.
z. 9 ad. sk.	R. Rancho Nuevo, Mizantla, Mexico, November (F. Ferrari-Perez).	Salvin-Godman Coll.
a'. ♂ ad. sk.	Rio Grande, Oaxaca, Mexico, May (Boucard).	Salvin-Godman Coll.

## 18. Chrysotis nattereri.

Psittacus (Chrysotis) nattereri, Finsch, Journ. f. Orn. 1864, p. 411.

Chrysotis thalassina, Natt. MS., fide Finsch, l. c. Chrysotis nattereri, Pelz. Verh. z.-b. Ges. Wien, 1865, p. 925; Finsch, Papag. ii. p. 563 (1868); G. R. Gr. Hand-list, ii. p. 165, n. 8342 (1870); Pelz. Orn. Bras. pp. 266, 448, liii (1871); Gieb. Thes. Orn. i. p. 683 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 22 (1873),

Psittacus thalassinus, Natt. MS., teste Pelz. Orn. Bras. p. 266. Androglossa nattereri, Rchmv. Journ. f. Orn. 1881, p. 369 (Consp. Psitt. p. 209); id. Vogelbild. Nachtr. 120 (1883).

Adult male. Green; forehead, sides of the head, and throat blue (or bluish green); bend of the wing and wing-speculum red; band at the tip of the tail, except the two central feathers, greenish yellow (Finsch): "bill horn-grey, blackish towards the tip, and with a yellowish spot on the sides of the upper mandible towards the base; feet brownish grey with a greenish tinge; naked skin round

the eyes white; iris orange" (Natterer), Length of the wing about 8.6 inches, tail 5.4.

Hab. Rio Mamoré, W. Brazil, near Rio Madeira.

I have not seen this species, of which only the type is known; this shows some asymmetrical coloration! Dr. Finsch says that C. nattereri is allied to C. farinosa, but that it differs in the yellow crown (not mentioned in the description!), in the blue colour of the forehead, lores, and region round the eyes, and in the red bases of the lateral tail-feathers (also not mentioned in the description!).

#### 19. Chrysotis dufresneana.

Le Perroquet Dufresne, Levaill. Hist. Nat. des Perr. ii. p. 53, pl. 91

(1805) (ex Cayenna).

Psittacus dufresnianus, Shaw, Gen. Zool. viii. 2, p. 513 (1811) (ex Levaillant); Steph. Gen. Zool. xiv. p. 106 (1826); Desm. Dict. Sc. Nat. xxxix. p. 103 (part.) (1826); Cuv. Règn. An. i. p. 465 (part.) (1829).

Psittacus dufresnianus, junior, Kuhl, Consp. Psitt. p. 79 (1820);

Desm. Dict. Sc. Nat. xxxix. p. 103 (1826).

? Psittacus coronatus, Licht. (nec Linn.) in Mus. Berol., fide Kuhl,

Psittacus dufresnii, junior, Kuhl, op. cit. p. 104 (1820).

Psittacus dufresneanus (av. junior), Wagl. Mon. Psitt. p. 594 (1832); Hahn, Orn. Atl., Papag. p. 91 (young), t. 71 (1837); Cab. in Schomb. Guiana, iii. p. 724 (1848).

Chrysotis dufresnii, Sw. Class B. ii. p. 301 (1837); Licht. Nomencl.

Av. p. 70 (partim) (1854).

Chrysotis dufresneanus, part., G. R. Gr. Gen. B. ii. p. 422, n. 13 (1846).

Chrysotis dufresniana, part., Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 100; G. R. Gr. List Psitt. Brit. Mus. p. 80 (spec. a) (1859); Pelz. Orn. Bras. p. 266 (note, part.) (1871).

Chrysotis dufresnianus, Bp. Naumannia, 1856, Consp. Psitt. n. 94 (part.); ? G. R. Gr. Hand-list, ii. p. 164, n. 8323 (part.) (1870). Amazona dufresniana, Schleg. Mus. P.-B. Psittaci, p. 52 (part.) (1864); id. op. cit. Revue, p. 27 (part.) (1874).

Chrysotis dufresnei, juv., Finsch, Papag. ii. p. 559 (1868); Gieb. Thes. Orn. i. p. 682 (part.?) (1872).

Chrysotis cedigena, Lawr. MS.; Sclat. P. Z. S. 1879, p. 815, 1880, p. 68, pl. ix. f. 1; Lawr. Ibis, 1880, p. 237: Salv. S. Sclat. ibid. p. 238; Rehnw. u. Schal. Journ. f. Orn. 1880, p. 209; Sclat. Ibis, 1881, p. 414; id. List Vert. An. 8th ed. p. 348 (1883); Salv. *Ibis*, 1886, pp. 68, 509.

Androglossa cæruligena, Rchnw. Journ. f. Orn. 1881, p. 374 (Consp. Psitt. p. 214); id. Vogelbild. Nachtr., in the text of n. 125 (1883).

Chrysotis dufresneana, Salvad. Ibis, 1890, p. 369.

Adult male. Green; forehead and lores orange-yellow, also the feathers of the pileum have a yellow tinge; cheeks and throat tinged with blue at the tip of the feathers; wing-speculum, formed by the base of the first four secondaries, orange; primaries black, with the base of the outer webs green; the innermost primaries and the secondaries dark blue at the tip; carpal edge yellowish green; inner webs of the quills below grass-green; tail green, with a broad

yellowish-green band at the tip of the lateral feathers; the four outer ones have an orange tinge, in some specimens reddish, on the inner webs of the apical portions; bill dusky, with the base of the upper mandible red; feet grey. Total length 14.5 inches, wing 8.5, tail 4.8, bill 1.6, tarsus 0.8.

Hab. Guiana.

a. Ad. st. Purchased. Bogota. Sclater Coll. b. ♀ ad. sk. Guiana. Camacusa, British Guiana, Salvin-Godman Coll. c. of ad. sk. April (H. Whitely). Bartica Grove, British Guiana, Salvin-Godman Coll. d, e, ∂ ♀ ad. sk. October (H. Whitely). Bartica Grove, British Guiana, Sclater Coll. f. of ad. sk. October (H. Whitely).

## 20. Chrysotis rhodocorytha.

Psittacus dufresnianus, ad., Kuhl, Consp. Psitt. p. 78 (1820); Desm. Dict. Sc. Nat. xxxix. p. 103 (1826); Cuv. Règn. An. i. p. 465 (part.) (1829).

Psittacus dufresneanus, Wied (nec Shaw), Reise, i. p. 51 (1820), ii. pp. 335, 341 (1821); id. Beitr. iv. p. 225 (S. Brazil) (1832); Burm. Syst. Ueb. ii. p. 183 (1856).

Amazona dufresniana, Less. Tr. d'Orn. p. 190 (1831); Schley. Mus. P.-B. Psittaci, p. 52 (partim) (1864); id. op. cit. Revue, p. 27 (1874).

Psittacus dufresneanus, ad., Wagl. Mon. Psitt. p. 594 (1832); Hartl. Syst. Verz. Ges. Mus. p. 87 (1844).

Chrysotis dufresneanus, part., G. R. Gr. Gen. B. ii. p. 422, n. 13

(1846).

Chrysotis dufresnii, part., Licht. Nomencl. Av. p. 70 (1854)

Chrysotis dufresniana, part., Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 100; ? G. R. Gr. List Psitt. Brit. Mus. p. 80, spec. b. (1859); Pelz. Orn. Bras. p. 266 (note, part.), pp. 448, liii (part.) (1871); Sclat. § Salv. Nomenel. Av. Neotrop. p. 113, n. 18 (Brazil) (1873); Sclat. P. Z. S. 1880, p. 68, pl. ix. f. 2; id. List Vert. An. 8th ed. p. 348 (1883).

Chrysotis dufresnianus, Souancé (nec Shaw), Rev. et Mag. de Zool. 1856, p. 154; Bp. Naumannia, 1856, Consp. Psitt. n. 94 (part.);

? G. R. Gr. Hand-list, ii. p. 164, n. 8323 (part.) (1870).

Chrysotis dufresneana, Bolle (nec Shaw), Journ. f. Orn. 1856, p. 170; Sclut. Cat. Am. B. p. 354, n. 2113 (1862).

Chrysotis dufresuei, part., Finsch, Papag. ii. p. 551 (1868); Gieb. Thes. Orn. i. p. 682 (part.?) (1872).
Psittacus dufresuii, Gulliv. P. Z. S. 1875, p. 489.

Androglossa dufresnii, Rehnw. (nec Shaw) Journ. f. Orn. 1881, p. 374 (Consp. Psitt. p. 214) (syn. emend.); id. Vogelbild. Nachtr. 125 (1883).

Chrysotis rhodocorytha, Sulvad. Ibis, 1890, p. 370.

Adult male. Green; pileum, or the anterior part of it, red; feathers of the occiput and hind neck with brown-red or maroon edges; lores yellow; cheeks and throat tinged with blue at the tips of the feathers; a red speculum on the wings; rest of the wing as in C. dufresneana; tail also like that of the last-named species, but the lateral feathers have a red patch towards the tips of the inner webs: upper mandible whitish, reddish towards the base; lower mandible horn-dusky; feet yellowish grey; iris orange-red. 14.5 inches, wing 9, tail 4.7, bill 1.4, tarsus 0.75. Total length

Young. Sinciput slightly tinged with red; speculum smaller and confined to two secondaries; red patches on the inner webs of the lateral tail-feathers towards the tip much smaller and less defined than in the adult bird.

Hab. South-eastern Brazil, from Espiritu Santo to Serra dos Orgãos.

a. Ad. st. Brazil. Purchased. b, c. Ad. et juy. sk. Brazil. Salvin-Godman Coll. d. Ad. sk. Brazil. Sclater Coll. e. Ad. sk. S.E. Brazil. Selater Coll. f. ♀ ad. sk. Zool. Soc. Coll. S.E. Brazil. g. Juv. sk. Purchased. [Bogota.] h. ♀ skeleton. Brazil.

## 21. Chrysotis viridigena.

Chrysotis viridigenalis, Cass. Pr. Ac. Sc. Philad. vi. p. 371 (1853); id. Journ. Ac. Nat. Sc. Philad. iii. p. 153, pl. xiii. (1855); Bp. Naumannia, 1856, Consp. Psitt. n. 93; Souancé, Icon. Perr. pl. xxxi. (lower figure) (1857); G. R. Gr. List Psitt. Brit. Mus. p. 82, spec. a (1859); Sclat. P. Z. S. 1863, p. 533, 1864, p. 298; G. R. Gr. Hand-list, ii. p. 164, n. 8327 (part.) (1870); Sclat. P. Z. S. 1874, pp. 206, 686, 1875, p. 62, 1878, p. 1018, 1881, p. 1014; id. List Vert. An. 8th ed. p. 347 (1883); Salv. Ibis, 1889, p. 241.

Psittaens vernans, Mus. Philad., fide Cass. ll. cc.

Chrysotis coccineifrons, Souancé, Rev. et Mag. de Zool. 1856, p. 154 (Colombia?); Bp. Naumannia, 1856, Consp. Psitt. n. 98 (part.); Selat. P. Z. S. 1857, p. 230; Finsch, Papag. ii. p. 540 (part.) (1868); Lawr. Ibis, 1871, p. 251; Gieb. Thes. Orn. i. p. 681 (part.) (1872); Rehnw. Journ. f. Orn. 1879, p. 212; id. Vogelbild. t. xix. f. 6 (1878-83).

Androglossa viridigenalis, Rchnw. Journ. f. Orn. 1881, p. 373 (Consp. Psitt. p. 213).

Adult male. Green, under surface brighter, the feathers edged with black; pileum and lores crimson, with the base of the feathers yellow; a deep blue band runs from above the eyes down the sides of the neck; occiput and hind neck green, with the feathers strongly edged with black; cheeks and ear-coverts bright grass-green; a crimson wing-speculum at the base of the outer webs of the first five secondaries; bastard-wing and primary-coverts green; first primary black, the remainder also black with the outer webs green at the base and blue-black at the tip; secondaries with deep blue tips; metacarpal edge pale green; greater under-coverts and bases of the inner webs of the guills below green; tail green, with a broad yellow-green band on the apical half, narrower on the two central feathers; no red spot at the base of the outer tail-feathers: bill yellowish white; feet pale; iris yellow. Total length about 13 inches, wing 8.2, tail 4.6, bill 1.25, tarsus 0.75.

Female. Like the male.

Young. Has only the forehead and lores red; the erown green like the occiput.

Hab. Eastern Mexico.

a. Ad. sk.	[Colombia.]	Massena Coll. (Type occineifrons, Souancé.)
b. Ad. sk.	01 0. 6.	Purchased.
c. of ad. sk.	[Colombia.]	Zool, Soc. Coll,
d. Ad. sk.	[Colombia.]	Sclater Coll.
$e-k$ . $\mathcal{J}$ ad. et	Monte Morelos, N. Leon,	Salvin-Godman Coll.
juv. sk.	Mexico, May (F. B. Arm- strong).	
l. ♀ ad. sk.	Rio Comachio, N. Leon,	Salvin-Godman Coll.
<b>—</b>	Mexico, June (F. B. Arm-strong).	
m. Ad. st.	Tamaulipas.	Zool. Soc. Coll.
n, o. ♂ ad. sk.	Sierra Madre, above Ciudad	Salvin-Godman Coll.
	Victoria, Tamaulipas (W. B. Richardson).	
$p$ -s. $\mathcal{S}$ ; $t$ , $u$ . $\mathcal{Q}$	Tampico, Mexico, March,	Salvin-Godman Coll.
ad. sk.	June (W. B. Richardson).	
v. ♀ ad. sk.	Tamesi, near Tampico, Mexico, March (W. B. Richardson).	Salvin-Godman Coll.
w. ♀ ad. sk.,	Tantina, nr. Tampico, Mexico,	Salvin-Godman Coll.
$x, y. \beta \ $ 2 ad. sk.	June (W. B. Richardson). Colipa, Mexico, March (F.	Salvin-Godman Coll.
1, y. 0 ± ad. sk.	D. Godman).	Sarvin-Codinan Coll.

#### 22. Chrysotis finschi.

Chrysotis viridigenalis, Sclat. (nec Cass.) P. Z. S. 1857, p. 230 (Mexico); ? Sousa, Mus. Nac. Lisb. Psittaci, p. 12 (Mexico) (1869); Sclat. P. Z. S. 1874, p. 206.

Chrysotis viridigenalis, part., Souancé, Icon. Perr. pl. xxxi. upper fig.

(California!) (1857).

Chrysotis viridigenalis, var., G. R. Gr. List Psitt. Brit. Mus. p. 82, spec. b (1859).

? Chrysotis glauciceps, Hartl. MS., fide G. R. Gr. l. c. in syn.

C. viridigenalis; ? Sclat. P. Z. S. 1864, p. 368.

Chrysotis finschi, Sclat. P. Z. S. 1804, p. 298; Finsch, Papag. ii. p. 543 (1868); G. R. Gr. Hand-list, ii. p. 165, n. 8337 (1870); Salv. Ibis, 1871, pp. 87, 97; Lawr. Ibis, 1871, p. 250; Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 15 (1873); Sclat. P. Z. S. 1874, p. 206, pl. xxxiv.; Lawr. Mem. Bost. Soc. Nat. Hist. ii. p. 296 (1874); id. Bull. U.S. Nat. Mus. n. 4, p. 37 (1875); Sclat. P. Z. S. 1881, p. 1014, Palver, Vagelleild, in the text of Sclat. P. Z. S. 1881, p. 1014; Rchnw. Vogelbild. in the text of pl. xix. f. 6 (1878-83); Sclat. List Vert. An. 8th ed. p. 347 (1883); Salv. & Godm. Ibis, 1889, p. 242.

Chrysotis diademata, part., Gieb. Thes. Orn. i. p. 681 (1872).

Androglossa finschi, Rehnw. Journ. f. Orn. 1881, p. 373 (Consp. Psitt. p. 213).

Amazona finschi, Ridgw. Man. N. Am. Birds, p. 587 (1887).

Adult male. Similar to the male of C. salvini, from which it differs in having the green colour darker but brighter and with a yellower tinge below, the black edges of the feathers much more strongly marked, the feathers of the hind neck with no lilac bands, or scarcely a trace of them, near the black edges, the frontal band and lores of a darker red, the first not well-defined behind, the lateral tail-feathers with no red mark on the bases, and the bill entirely yellowish white: "iris orange; bill dirty white; feet light grey" (Sumichrast). Total length about 13 inches, wing about 8, tail 4.8, bill 1.3, tarsus 0.65.

Female. Like the male.

Hab. Western Mexico, from Sinaloa to Tehuantepee.

a. Ad. sk.	Mexico.	Purchased (Type of
b. Ad. sk.	[California.]	species.) Massena Coll.
0 1 1		gured by De Souancé.)
<ul> <li>c. ♀ ad. sk.</li> <li>d. ♂ ad. sk.</li> </ul>	Mexico.	Sclater Coll.
a. o aa. sk.	W. Mexico.	Zool, Soc. Coll.
. 1 .1 .1-		Z. S. 1874, pl. xxxiv.)
e. ♂ ad. sk.	Choix, Sinaloa, Mexico, June (W. Lloyd).	Salvin-Godman Coll.
f, g, h. ♂ ad. sk.	Near Culebra, Sinaloa, Mexico,	Salvin-Godman Coll.
	(W. Lloyd).	
<i>i</i> , ♀ ad, sk.	Mazatlan, W. Mexico (A. J.	Salvin-Godman Coll.
	Grayson).	~ · · · · · · · · · · · · · · · · · · ·
k. ♂ ad. sk.	Mazatlan, W. Mexico, Dec. (A. Forrer).	Salvin-Godman Coll.
l. ♀ ad. sk.	Presidio, Mexico, Dec. (A.	Salvin-Godman Coll.
т	Forrer).	
m. $Q$ ad. sk.	Presidio, Mexico, March (A.	Sclater Coll.
	Forrer).	
n, o.	San Blas, Territory of Tep, Mexico, May (W. B. Rich- ardson).	Salvin-Godman Coll.
$p$ . $\mathcal{J}$ ad. sk.	Beltran, Jalisco, Mexico, April (W. Lloyd).	Salvin-Godman Coll.
q. Ad. sk.	Putla, W. Mexico (Rebouch).	Salvin-Godman Coll.

## 23. Chrysotis diademata. (Plate VII. fig. 2.)

Psittaeus diadema, Spix, Av. Bras. i. p. 43, t. xxxii. (1824); Cuv. Règn. An. i. p. 465 (1829); Voigt, Cuv. Uebers. p. 744 (1831); Brehm, Mon. d. Papag. t. 43; Schleg. Dierent. p. 65 (1864).

Psittacus autumnalis, jun., Wagl. Mon. Psitt. p. 591 (1832). Chrysotis autumnalis, part., G. R. Gr. Gen. B. ii. p. 422, n. 9

(1846).

Chrysotis diadema, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 104; Souancé, Rev. et Mag. de Zool. 1856, p. 154; Bp. Naumannia, 1856, Consp. Psitt. n. 97; Souancé, Icon. Perr. pl. xxxii. (1857); G. R. Gr. List Psitt. Brit. Mus. p. 81 (1859); ? Sousa, Mus. Nac. Lisb. Psitt. p. 11 (1869); G. R. Gr. Hand-list, ii. p. 164, n. 8326 (1870).

Chrysotis diademata, part., Finsch, Papag. ii. p. 545 (1868); Gieb.

Thes. Orn. i. p. 681 (part.) (1872).

Adult. Green, the feathers with a slight powdered appearance and slightly edged with dusky; forehead crimson, changing into dark purple-red on the lores; crown lilae; occiput greenish yellow; feathers of the hind neck green, with lilae edges at the tips; chin vinous red; under tail-coverts, metacarpal edge, and smaller under wing-coverts yellowish green; a red speculum at the

base of the inner webs of the first five secondaries; bastard-wing and primary-coverts green; primaries black, with the outer webs green at the base, deep blue at the tip; tips of the secondaries deep blue; greater under wing-coverts and inner webs of the quills towards the base below green; central tail-feathers entirely green, the lateral ones with a broad yellow-green band at the tip, and with the base red on the inner webs and blue on the outer ones; bill dusky, with the base of the upper mandible yellowish; feet grey-black. Total length about 14.5 inches, wing 9, tail 5, bill 1.4, tarsus 0.78.

Hab. Amazon Valley, along the Solimoës River.

This bird seems extremely rare, and its range is not exactly known.

a. Ad. sk.

Brazil. Massena Coll. (Specimen figured by De Souancé.)

## 24. Chrysotis salvini. (Plate VII. fig. 3.)

Chrysotis viridigenalis, Sclat. (nec Cass.) P. Z. S. 1864, p. 298; Sclat.
Scalv. P. Z. S. 1864, p. 368 (Panama); Lawr. Ann. Lyc. N.Y. ix.
p. 131 (Panama) (1868); Frantz. Journ. f. Orn. 1869, p. 365 (Costa Rica).

Amazona autumnalis, part., Schleg. Mus. P.-B. Psittaci, p. 51, n. 3

(1864).

Chrysotis autumnalis, Frantz. (nec Linn.) Journ. f. Orn. 1869, p. 365

(Costa Rica).

Chrysotis diademata, part., Finsch, Papag. ii. p. 545 (1868); Salvin, P. Z. S. 1870, p. 214 (Veragua); id. Ibis, 1870, p. 113 (Costa Rica, Veragua), 1871, pp. 87, 97 (Costa Rica, Veragua, Panama); Lawr. Ibis, 1871, p. 250 (Panama); Salv. Ibis, 1871, p. 251; Pelz. (nec Spix) Orn. Bras. pp. 265, 448, lii (1871) (Rio Negro); Sclat. P. Z. S. 1871, p. 777; Gieb. Thes. Orn. i. p. 681 (part.) (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 16 (1873) (Guiana int.!, Colombia, and Panama); Sclat. & Salv. P. Z. S. 1879, p. 538 (Remedios, Antioquia); Selat. List Vert. An. 8th ed. p. 347 (1883); Nutting, Pr. U.S. Nat. Mus. vi. p. 407 (Nicaragua) (1883); Zeled. Pr. U.S. Nat. Mus. viii. p. 111 (1885).

Chrysotis viridigenalis, part., Sclut. & Salv. Nomencl. Av. Neotrop.

p. 113, n. 14 (Colombia) (1873).

Amazona diadema, Schleg. Mus. P.-B. Psittaci, Revue, p. 27 (1874). Androglossa diademata, Rchnw. (nec Spix) Journ. f. Orn. 1881, p. 372 (Consp. Psitt. p. 212) (Guiana, Colombia, Panama); id. Vogelbild. Nachtr. 124 (1883).

Adult male. Green, the feathers with a slight powdered appearance and slightly edged with dusky; frontal band extended to the lores, crimson; feathers of the crown, occiput, and hind neek green, with lilac edges, the last narrowly margined with black; under surface green, but paler than the upper parts; under tail-coverts yellowish green; metacarpal edge pale green; a red speculum at the base of the inner webs of the first five secondaries; bastard-wing and primary-coverts green; primaries black, the first entirely so, the remainder with the outer webs green at the base, deep blue at the

tip; tips of the secondaries deep blue; greater under wing-coverts and inner webs of the quills towards the base below green; tail-feathers green, with a broad yellow-green band at the tip, narrower on the two central feathers; bases of the lateral tail-feathers red on the inner webs, the outer tail-feather edged with blue at the base of the outer web: bill dusky, with the base of the upper mandible whitish horn-colour; feet dusky; "iris red" (Carmiol). Total length about 14 inches, wing 8, tail 5, bill 1.2, tarsus 0.75.

Female. Like the male.

Young. Scarcely any red at the base of the outer tail-feathers.

Hab. From Nicaragua, Costa Rica, Veragua, and Panama, in Central America, to Colombia, and also to Rio Negro in the Amazon

Valley.

This species is very much like *C. diademata* (Spix), from which it differs in having (1) the frontal red band not turning to dark garnet on the lores; (2) the feathers of the crown, occiput, and hind neck green with lilae edges; (3) the occiput without yellow tinge; (4) the cheeks and the under surface distinctly yellowish green. Some specimens show a reddish tinge on the chin.

 α. δ ad. sk. Peje, Costa Rica, March Salvin-Godman Coll. (J. Carmiol). b. Ad. sk. Costa Rica (J. Carmiol). Sclater Coll. Calovevora, Veragua (Arcé). Salvin-Godman Coll. Bugaba, Chiriqui (*Arcé*). Salvin-Godman Coll. y. Ad. sk. h, i. ♂♀ ad. sk. k. Ad. sk. Panama (McLeannan). Sclater Coll. Panama (McLeannan). Salvin-Godman Coll. Lion Hill Station, Isthmus Salvin-Godman Coll. of Panama (O. Salvin). (Type of species.) l. Ad. sk. Remedios, U.S. of Colombia Salvin-Godman Coll. (T. K. Salmon). Sclater Coll. m. Ad. sk. Rio Negro (Natterer).

## 25. Chrysotis lilacina. (Plate VII. fig. 1.)

Amazona lilacina, Less. Echo du Mond Savant, 1844, t. 2. no. 30, p. 394 (Guayaquil)\*; id. Descr. Mamm. et Ois. p. 194 (1847). Chrysotis coccineifrons, Bp. Naumannia, 1850, Consp. Psitt. n. 98

(part.).

Chrysotis viridigenalis, G. R. Gr. Hand-list, ii. p. 164, n. 8327 (part., Ecuador) (1870); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 14 (part., Ecuador) (1873); Tacz. & Berl. (nec Cass.) P. Z. S. 1885, p. 119 (Ecuador).

P. Z. S. 1885, p. 119 (Ecuador). Chrysotis sp., Tacz. & Berl. P. Z. S. 1885, pp. 109, 114, 115, 121 (Naranchito, W. Ecuador).

Adult. Green, with the feathers edged with black; under surface lighter green; forehead and lores red, which colour extends over the eyes, forming a superciliary stripe; pileum, except the forehead, lilac, with the bases of the feathers green and the narrow edges reddish; occiput and hind neck green, with the feathers edged with

<sup>\*</sup> This quotation, given by Lesson himself in the 'Descr. Mamm. etc.,' is wrong, and I have not been able to find the right one.

black; checks yellow-green; ear-coverts green like the underparts; metacarpal edge pale yellowish green; bastard-wing and primary-coverts green; wing-speculum, formed by the base of the outer webs of the first five secondaries, red; first quill entirely black, the remaining quills black, with the outer webs green at the base and deep blue towards the tips; secondaries tipped with deep blue; tail green, with a broad yellow-green band at the tip, narrower on the two central feathers; the two outermost tail-feathers with the base of the inner webs red, the outer feather edged with blue at the base of the outer web: bill dusky horn-colour; feet dark grey. Total length about 13 inches, wing 8, tail 4·3, bill 1·1, tarsus 0·7.

Hab. Western Ecuador.

This species is easily distinguished by the yellow tinge of the green cheeks, by the light but bright red colour of the forehead extending over the eyes and forming superciliary bands, and by the lilac feathers of the crown having pale red edges.

a. Ad. sk. Balzar Mountains, W. Ecuador Salvin-Godman Coll.\* (Illingworth).

## 26. Chrysotis autumnalis.

The Lesser Green Parrot, Edw. Birds, iv. pl. 164 (1750). Psittacus viridis minor occidentalis, Edw. op. cit. p. 246 (1750). Psittacus americanus, Briss. Orn. iv. p. 293 (1760); ? Gulliv. P.Z. S. 1875, p. 489.

Psittaeus autumnalis, Linn. S. N. i. p. 147, n. 37 (1766); Gm. S. N. i. p. 345, n. 37 (excl. var.) (1788); Lath. Ind. Orn. i. p. 124, n. 122 (excl. var.) (1790); Shaw, Gen. Zool. viii. 2, p. 516 (1811); Bechst. Kurze Ueb. p. 98 (1811-12); Vieill. N. D. xxv. p. 327 (second var.) (1817); Kuhl, Consp. Psitt. p. 79 (1820); Vieill. Enc. Méth. iii. p. 1373 (1823); Steph. Gen. Zool. xiv. p. 106 (1826); Less. Tr. d'Orn. p. 196 (1831); Voigt, Cuv. Uebers. p. 741 (1831); Wagl. Isis, 1831, p. 525; id. Mon. Psitt. p. 591 (part.) (1832); Hartl. Syst. Verz. Ges. Mus. p. 87 (1844); Brehm, Mon. d. Papag. t. 57; Burm. Syst. Ueb. ii. p. 185 (syn. emend.) (1856); Schleg. Dierent. p. 65 (1864).

#### CHRYSOTIS HECKI.

Androglossa hecki, Rchnw. Journ. f. Orn. 1891, p. 217.

Allied to *C. diademata*, but throat and anterior part of the lower cheeks vinous-red; outermost tail-feathers with the base of the inner webs broadly red. Feathers of the body with no black edges; cheek-feathers near the upper mandible partly with red edges; the blue tinge of the pileum and nape, produced by the blue edges of the feathers, inclining to dull rose-colour; tip of the tail yellow-green: upper mandible yellow, with the edges and tip, like the lower mandible, blackish; feet grey.

Hab. Colombia (?).

Obs. The type is a bird living in the Zoological Gardens of Berlin. The dull rose tinge of the feathers of the pileum and nape seems to ally this species to C. lilacina.

<sup>\*</sup> I am only acquainted by the description with the following species recently named :—

Blue-faced Parrot, var. B, Autumnal Parrot, Lath. Syn. i. p. 293 (1781); id. Gen. Hist. ii. p. 248 (1822).

Le Perroquet à joues orangées, Levaill. Perr. pl. 111 (1805).

Psittacus aurantius, Vieill. N. D. xxv. p. 325 (1817); id. Enc. Méth. iii. p. 1373 (1823).

Chrysotis autumnalis, Sw. Class. B. ii. p. 301 (1837); G. R. Gr. Gen. B. ii. p. 422, n. 9 (syn. emend.) (1846); Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 102 (excl. syn.); Souance, Rev. et Mag. de Zool. 1856, p. 154; Bp. Naumaunia, 1856, Consp. Psitt. n. 99; Sclat. P. Z. S. 1857, pp. 205, 230; G. R. Gr. List Psitt. Brit. Mus. p. 81, n. 18 (1859); Moore, P. Z. S. 1859, p. 59; Sclat. P. Z. S. 1859, p. 389; Sclat. & Salv. Ibis, 1860, p. 401; Finsch, Die Papag. 1838, p. 333, Schar, q Shar, 1838, 1830, p. 131, 1843, p. 11 (1869); ii. p. 547 (1868); Sousa, Mus. Nac. Lisb. Psittaci, p. 11 (1869); G. R. Gr. Hand-list, ii. p. 164, n. 8324 (1870); Schat. § Salv. P. Z. S. 1870, p. 837; Salv. Ibis, 1871, pp. 87, 98; Lawr. Ibis, 1871, p. 250; Gieb. Thes. Orn. i. p. 680 (1872); Schat. § Salv. Nomencl. Av. Neotrop. p. 113, n. 17 (1873); Lawr. Bull. U.S. Nat. Mus. n. 4, p. 36 (1875); Rehnw. Vogelbild. t. xix. f. 7 (1878– 83); Sclat. List Vert. An. 8th ed. p. 347 (1883); Nutting, Pr. U.S. Nat. Mus. vi. p. 388 (1883); Salv. & Godm. Ibis, 1889, pp. 241, 373; Salv. Ibis, 1890, p. 88.

Chrysotis astivalis, Bp. Naumannia, 1856, Consp. Psitt. n. 100 (descr. nulla)\*; G. R. Gr. List Psitt. Brit. Mus. p. 81, n. 19 (1859); Selat. P. Z. S. 1859, p. 389; G. R. Gr. Hand-list, ii. p. 164,

n. 8325 (1870); Salv. Ibis, 1871, p. 88 (note). Amazona autumnalis, Schleg. Mus. P.-B. Psittaci, p. 51 (part.) (1864); id. op. cit. Revue, p. 26 (1874); Riagw. Man. N. Am. Birds, p. 587 (1887).

Androglossa autumnalis, Rehnw. Journ. f. Orn. 1881, p. 374 (Consp. Psitt. p. 214).

Adult male. Green; forehead, lores, and wing-speculum scarlet: feathers of the crown, occiput, and nape green, lilac towards the tips, and edged with dusky or black; upper part of the cheeks from the mouth to the ear-coverts yellow, with the hidden bases of the feathers crimson; first primary black, the others have the outer webs blue-black towards the tips and green at the base; tips of the secondaries blue; metacarpal edge and smaller under wingcoverts yellowish green, the greater ones and inner webs of the quills below grass-green; tail green, with a broad yellowish-green band at the tip of the lateral feathers; the outer tail-feather edged with blue on the outer web: bill light horn-colour, with the tip of the upper mandible dusky; "feet light greenish ash; iris orangeyellow" (Sumichrast). Total length 13.5 inches, wing 8.2, tail 3.7, bill 1.4, tarsus 0.8.

Female. Like the male.

Hab. Eastern Mexico and Central America as far as Honduras, and also Ruatan Island.

An apparently young bird from Belize has scarcely any yellow feathers on the upper part of the cheeks, which are almost entirely green.

<sup>\*</sup> The type of C. astivalis, Bp., is in the British Museum, and no doubt belongs to the present species.

a. Ad. st.	S. America.	Zoological Society's Coll.
b. Ad. sk.	Mexico.	Purchased.
c. Ad. sk.	Tamaulipas.	Salvin-Godman Coll.
<i>d</i> − <i>h</i> . ♂ ad. sk.	Tampico, Mexico, Feb., May, June (W. B. Richardson).	Salvin-Godman Coll.
i. d ad. sk.	Tamesi, nr. Tampico, Mexico, March (W. B. Richardson).	Salvin-Godman Coll.
k. ♀ ad. sk.	Tantina, nr. Tampico, Mexico, June (W. B. Richardson).	Salvin-Godman Coll.
7. Ad. sk.	Jalapa, Mexico.	De Oca [C.].
	(Ty	pe of C. æstivalis, Bp.)
m. Ad. sk.	Jalapa, Mexico (Höge).	Salvin-Godman Coll.
n. d ad. sk.	Colipa, Vera Cruz, Mexico, March (F. D. Godman).	Salvin-Godman Coll.
o, p, q, d : r. Q ad.	Vega del Casadero, Vera Cruz, Mexico, Dec. (M. Trujillo).	Salvin-Godman Coll.
s. d ad. sk.	Potrero, Vera Cruz, Mexico, Dec. (F. Sumichrast).	Salvin-Godman Coll.
$t, u. \ \beta \ \ $ ad. sk.	Playa Vicente, Vera Cruz, Mexico, Dec. (M. Trujillo).	Salvin-Godman Coll.
v. Ad. sk.	Guatemala.	O. Salvin, Esq. [P.].
w. Ad. sk.	Las Salinas, Vera Paz, Guatemala, March (O. Salvin).	Salvin-Gódman Coll.
x. Ad. sk.	Choctum, Vera Paz, Guate-mala, Jan. (O. Salvin).	Salvin-Godman Coll.
y. Ad. sk.	Vicinity of Belize, Brit. Hon- duras (Blancaneaux).	Salvin-Godman Coll.
z. Imm. sk.	Belize, British Honduras.	Purchased.
a'. Ad. sk.	San Pedro, Honduras (H.	Sclater Coll.
	Whitely).	
b'. Ad. sk.	San Pedro, Honduras (G. M. Whitely).	Salvin-Godman Coll.
c', d'. Ad. sk.	Ruatan Island, Bay of Honduras (G. F. Gaumer).	Salvin-Godman Coll.

# 27. Chrysotis xanthops.

Psittacus xanthops, Spix, Av. Bras. i. p. 39, t. xxvi. (juv.) (1824); Cuv. Règn. An. i. p. 465 (1829); Voigt, Cuv. Uebers. p. 744 (1831); Brehm, Mon. d. Papag. t. 37; Souancé, Rev. et Mag. de Zool. 1856, p. 153.

Psittacus amazonicus, pull., Wagl. Mon. Psitt. p. 589 (1832).

Psittacus hypochondriacus, Licht. in Mus. Berol.; Wagl. Mon. Psitt.

p. 593 (1832).

Chrysotis xanthops, Sw. Class. B. ii. p. 301 (1837); Licht. Nomencl. Av. p. 70 (1854); Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 91; G. R. Gr. List Psitt. Brit. Mus. p. 79 (1859); Pelz. Verh. z.-b. Ges. Wien, 1865, p. 926 (var.); G. R. Gr. Hand-list, ii. p. 164, n. 8317 (1870); Pelz. Orn. Bras. pp. 267, 448, liii (1871); Selat. § Salv. Nomencl. Av. Neotrop. p. 114, n. 31 (1873).

Chrysotis hypochondriacus, G. R. Gr. Gen. B. ii. p. 422, n. 8

(1846).

Chrysotis hypochondriaca, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 96; Souancé, Rev. et Mag. de Zool. 1856, p. 153; Bp. Naumannia, 1856, Consp. Psitt. n. 89; Des Murs in Casteln. Expéd. Am. du Sud, Ois. p. 16, pl. 5 (1855); Hart!, Journ. f. Orn. 1857,

p. 42; Souancé, Icon. Perr. pl. xxxiii. (1857); G. R. Gr. List Psitt. Brit. Mus. p. 80 (1859).

Amazona xanthops, Schley. Mus. P.-B. Psittaci, p. 57 (1864); id. op. cit. Revue; p. 27 (1874).

Chrysotis xanthopes, Finsch, Papag. ii. p. 596 (1868).

Chrysotis xanthopsis, Finsch, Papag. ii. p. 962 (1868); Gieb. Thes. Orn. i. p. 684 (1872).

Androglossa xanthops, Rehnw. Journ. f. Orn. 1881, p. 379 (Consp.

Psitt. p. 219); id. Vogelbild. t. xxxiii. f. 3 (1883).

Adult. Green, the feathers with darker edges; under surface and upper tail-coverts yellowish green; head yellow, a broad band across the abdomen yellow; on the sides an orange-red spot: primarycoverts green; outer webs of the primaries bluish green; central tailfeathers green, the lateral ones with the apical half greenish yellow and the basal half orange-red; the outer tail-feather green on the outer web: bill dusky yellow. Length of the wing about 7 inches,

tail 3, eulmen 1.2, tarsus 0.6.

Young. Green; sinciput, lores, periophthalmic region, and earcoverts yellow, the last with an orange tinge; feathers of the occiput, neck, breast, and abdomen with dusky edges; the underparts lighter than the upper ones; upper and under tail-coverts yellowish green; an orange-red spot on the sides, under the wings; upper wing-coverts and secondaries with light green edges; metacarpal edge pale green; no wing-speculum; primary-coverts and outer webs of the primaries bluish green; under wing-coverts green, with paler edges; greater under wing-coverts and inner webs of the quills below green; central tail-feathers green (?), the lateral feathers with the apical half greenish vellow and the basal half orange-red; outer tail-feather with the outer web green: bill dusky horn-colour. Total length about 10.5 inches, wing about 7, bill 1.2, tarsus 0.6. (Brit. Mus.)

Hab. Eastern and Central Brazil, from Minas Geraes to Cuyaba. I have only seen the specimen mentioned below, which has been kept in confinement and seems not fully adult. It appears that in this species there is a good deal of individual variation. The older bird seems that figured by Reichenow; Des Murs has figured one with the pileum entirely green, the cheeks and throat yellow, the characteristic orange-red spot on the sides, and across the abdomen the broad yellow band, which seems to distinguish old birds; De Souancé and Spix have figured younger birds.

a. Imm. sk.

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Purchased.

# 28. Chrysotis brasiliensis.

The Brasilian Green Parrot, Edw. Birds, iv. pl. 161 (1751). Psittacus viridis Brasiliensis, Edw. Birds, iv. p. 246 (1751). Psittacus Brasiliensis fronte rubra, Briss. Orn. iv. p. 254 (1760). Psittacus brasiliensis, *Linn. S. N.* i. p. 147, n. 36 (1766); *Gm. S. N.* i. p. 344, n. 36 (1788); *Shaw, Gen. Zool.* viii. p. 514, pl. 77 (1811); *Bechst. Kurze Ueb.* p. 99, n. 170 (1811); *Wagl. Mon. Psitt.* p. 592 (1832); *Schleg. Dierent.* p. 65 (1864). Χ

Blue-faced Parrot, var. C, Brasilian Green Parrot, *Lath. Syn.* i. p. 294 (1781).

Psittacus autumnalis, var. 8, Lath. Ind. Orn. i. p. 125 (1790).

Le Perroquet à joues blues, Levaill. Perr. pl. 106 (1805).

Psittacus erythropsis, Vieill. N. D. xxv. p. 325 (1817); id. Enc. Méth. iii. p. 1373 (1823).

Reth. In. p. 1313 (1923);
Psittacus cyanotis, Temm. § Kuhl, Consp. Psitt. p. 77 (1820);
Steph. Gen. Zool. xiv. p. 104 (1826);
Voigt, Cuv. Uebers. p. 741 (1831);
Brehm, Mon. d. Papag. t. 55;
Burm. Syst. Ueb. ii. p. 185 (note)

(1856).

Psittacus erythrurus, Kuhl, Consp. Psitt. p. 77 (1820); Steph. Gen. Zool. xiv. p. 104 (1826); Wagl. Mon. Psitt. p. 593 (1832).
 Autumnal Parrot, var. C, Lath. Gen. Hist. ii. p. 249 (1822).

Chrysotis cyanotis, Sw. Class. B. ii. p. 301 (1837).

Chrysotis brasiliensis, G. R. Gr. Gen. B. ii. p. 422, n. 10 (1846); Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 99; id. Naumannia, 1856, Consp. Psitt. n. 95; G. R. Gr. List Psitt. Brit. Mus. p. 81 (1859); Finsch, Papag. ii. p. 533 (1868); Sousa, Mus. Nac. Lisb. Psittaci, p. 11 (1869); G. R. Gr. Hand-list, ii. p. 165, n. 8338 (1870); Pelz. Orn. Bras. pp. 265, 448, liii (1871); Gieb. Thes. Orn. ii. p. 681 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 12 (1873).

Chrysotis erythrurus, G. R. Gr. Gen. B. ii. p. 422, n. 12 (1846).
Chrysotis erythrura, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 103; id. Naumannia, 1856, Consp. Psitt. n. 101; G. R. Gr. List Psitt. Brit. Mus. p. 81 (1859); Finsch, Papag. ii. p. 535 (1868); G. R. Gr. Hand-list, ii. p. 165, n. 8340 (1870); Pelz. Orn. Bras. i. p. 265 (note) (1871); Gieb. Thes. Orn. i. p. 682 (1872); Sclat. P. Z. S. 1879, pp. 438, 834, 1880, p. 23, pl. ii.; id. Ibis, 1881, p. 412; id. List Vert. An. 8th ed. p. 347 (1883); id. P. Z. S. 1884, p. 562.

Amazona brasiliensis, Schleg. Mus. P.-B. Psittaci, p. 57 (1864);

id. op. cit. Revue, p. 28 (1874).

Androglossa brasiliensis, Rchnw. Journ. f. Orn. 1881, p. 371 (Consp. Psitt. p. 211); id. Vogelbild. Nachtr. 123 (1883).

Androglossa erythrura, Rchnw. Journ. f. Orn. 1881, p. 371 (Consp. Psitt. p. 211); id. Vogelbild. t. xxxii. f. 1 (1883).

Adult male. Green, edges of the feathers black, under surface lighter green, under tail-coverts yellowish green; sinciput and lores pink-red; feathers of the vertex slightly yellowish; checks, ear-coverts, and chin purplish, with the tips of the feathers purpleblue; metacarpal edge pink-red; upper wing-coverts and innermost green secondaries with paler or yellowish-green edges; primarycoverts green like the bases of the outer webs of the quills; first primary black, the apical half of the remaining primaries black with a slight tinge of deep blue; secondaries green, with the tips blue; under wing-coverts yellowish green; quills below blackish, with a slight tinge of bluish or bluish green towards the base of the inner webs; tail green, with a band at the tip greenish yellow, followed by a subapical one carmine-red, and by a third purple-blue on the outer three tail-feathers; the outer web of the outer tail-feather more than half purple-blue; tail underneath carmine, with a yellow-green band at the tip and a dull purple one towards the base: bill pale horn-colour, with the tip of the upper mandible

dusky; feet grey. Total length about 14 inches, wing 8.2, tail 4.5, bill 1.2, tarsus 0.7.

Hab. Province of San Paulo, South Brazil.

The female mentioned below has less red on the sinciput, the feathers of which are yellowish green edged with red, which colour is nearly confined to the forehead and lores; the cheeks are less purple, the feathers being dusky green with purple-blue tips.

a. Ad. sk. S. America (Westerman). Sclater Coll. b. ♀ ad. sk. S. America. Zoological Society's Coll. c. d ad. sk. Brazil. Zoological Society's Coll.

## 29. Chrysotis bodini.

Chrysotis bodini, Finsch, P. Z. S. 1873, p. 569, pl. xlix.; Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 2 (1873); Gieb. Thes. Orn. iii. p. 796 (1877); Rehnw. Vogelbild. t. i. f. 3 (1878); Sclat. P. Z. S. 1879, pp. 438, 834, 1880, pp. 23, 718; id. Ibis, 1881, p. 412; id. List Vert. An. Sth ed. p. 346 (1883); Sclat. P. Z. S. 1887, p. 2. W. L. Sclat. Ibis, 1887, p. 318 1887, p. 2; W. L. Sclat. Ibis, 1887, p. 318. Androglossa bodini, Rehnw. Journ. f. Orn. 1881, p. 371 (Consp. Psitt. p. 211); id. Voyelbild. t. xxxii. f. 8 (1883).

Resembles C. festiva, from which it differs in having:—1st, the green colour more yellowish, especially on the under surface; 2nd, the dull red colour of the frontal band extended over the sinciput: 3rd, the feathers of the vertex and occiput edged with dull purple; 4th, the lores blackish; 5th, the feathers of the hind neck edged with black; 6th, the feathers of the cheeks edged with purple-blue; 7th, the metacarpal edge yellowish; 8th, the bastard-wing, the primary-coverts, and the outer webs of the primaries green. "Bill and cere blackish; feet dark plumbeous; iris yellow, with an outer circle of red" (Finsch). Total length about 4 inches, wing 8, tail 4.4, bill 1.3, tarsus 0.75.

Hab. Venezuela, and perhaps also British Guiana.

a. Ad. sk. Barima River, Brit. Guiana Sclater Coll. (W. L. Sclater). Venezuela. b. Ad. sk. Sclater Coll.  $c. \ \Omega$  ad. sk. Venezuela. Zoological Society's Coll.

# 30. Chrysotis festiva.

Psittacus festivus, Linn. S. N. i. p. 147, n. 35 (1766); Gm. S. N. i. p. 344, n. 35 (1788); Lath. Ind. Orn. i. p. 126, n. 129 (1790); Shaw, Gen. Zool. viii. 2, p. 521 (1811); Bechst. Kurze Ueb. p. 101 Shake, Gen. 2004. Vill. 2, p. 14 (1817); Betas. Rath. Consp. Psitt. (1811–12); Vieill. N. D. xxv. p. 331 (1817); Kuhl, Consp. Psitt. p. 81 (1820); Vieill. Enc. Méth. iii. p. 1376 (1823); Spix, Ac. Bras. i. p. 44 (1824); Steph. Gen. Zool. xiv. p. 106 (1826); Voigt, Cuv. Uebers. p. 742 (1831); Less. Tr. & Orn. p. 196 (1831); Wagl. Mon. Psitt. p. 580 (1832); Selby, Nat. Libr., Parrots, p. 102, pl. ix. (1836); Hartl. Syst. Verz. Ges. Mus. p. 87 (1844); Cab. in Schomb. Guian. iii. p. 724 (1848); Burm. Syst. Ueb. ii. p. 189 (1856).

Le Perroquet Tahua de Cayenne, D'Aubent. Pl. Enl. 840.

Tavoua, Buff. Hist. Nat. Ois. vi. p. 240 (1779). Festive Parrot, Lath. Syn. i. p. 298, n. 102 (1781); id. Gcn. Hist. ii. p. 252 (1822).

L'Amazone tapiré en rouge, Levaill. Perr. pl. 88 (var.) (1805).

Le Perroquet Tavoua, Levaill. Perr. pl. 129 (1805).

Chrysotis festivus, Sw. Class. B. ii. p. 300 (1837); G. R. Gr. Gen. B. ii. p. 422, n. 1 (1846).

Chrysotis festiva, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 89; Souancé, Rev. et Mag. de Zool. 1856, p. 153; Bp. Naumannia, 1856, Consp. Psitt. n. 83; G. R. Gr. List Psitt. Brit. Mus. p. 80 (1859); Sclat. Cat. Am. B. p. 354, n. 2114 (1862); Sclat. & Salv. P. Z. S. 1866, p. 197; Finsch, Papag. ii. p. 511 (part.) (1868); Sousa, Mus. Nac. Lisboa, Psittaci, p. 11 (1869); G. R. Gr. Hand-list, ii. p. 164, n. 8320 (1870); Finsch, P. Z. S. 1870, pp. 554–586; Pels Orn Bras. pp. 265–449 [iii] (part.) (1871). pp. 554, 586; Pelz. Orn. Bras. pp. 265, 449, liii (part.) (1871); Gieb. Thes. Orn. i. p. 682 (part.) (1872); Sclat. & Salv. P. Z. S. 1873, p. 300; iid. Nomencl. Av. Neotrop. p. 113, n. 1 (1873); Garrod, P. Z. S. 1873, pp. 466, 634, 1874, p. 587, 1875, p. 343; Rehnw. Vogelbidt. t. i. f. 2 (1878); Tacz. P. Z. S. 1882, p. 466, 634, 17, 17, 17, 1874, p. 1866, 1882, p. 1866, 1874, p. 1875, p. Sclat. List Vert. An. 8th ed. p. 345 (1883); Salv. Ibis, 1886, p. 68; Tacz. Orn. Pér. iii. p. 222 (syn. emend.), Tabl. p. 100 (1886).

Amazona festiva, Schleg. Mus. P.-B. Psittaci, p. 57 (1864); id. op. cit. Revue, p. 28 (1874).

Androglossa festiva, Rchnw. Journ. f. Orn. 1881, p. 370 (Consp. Psitt. p. 210).

Adult male. Green, frontal edge and lores dull red; superciliary band and chin light blue, sometimes the vertex also bluish; lower back and rump red; bastard-wing, primary-coverts, and outer webs of the primaries deep blue; first primary and inner webs of the remaining primaries black; secondaries green; greater under wingcoverts and inner webs of the quills below verditer-green; tail green, each feather edged with yellowish green at the tip, the outer one edged with bluish on the outer web: bill and feet dusky; iris yellow-orange. Total length 14.5 inches, wing 8.5, tail 4.8, bill 1.3, tarsus 0.8.

Hab. Guiana (?), Amazons Valley up to Eastern Peru.

a. Ad. st. S. America. Purchased. b. ♀ ad. sk.
 c. Ad. sk. S. America (Stolzmann). Sclater Coll. S. America (Fraser). Sclater Coll. Elvira, E. Peru (J. Hauxwell). Salvin-Godman Coll. d. ♂ ad. sk. e. d ad. sk. f. d ad. sk. Elvira, E. Peru (J. Hauxwell). Sclater Coll. Ucayali, May (E. Bartlett). Purchased. g. Ad. st. Para, R. Graham, Esq. P.].

# 31. Chrysotis chloronota. (Plate VIII.)

Chrysotis chloronota, Souancé, Rev. et Mag. de Zool. 1856, p. 153; Bp. Naumannia, 1856, Consp. Psitt. n. 84; Souancé, Icon. Perr. pl. xxix. (1857); G. R. Gr. List Psitt. Brit. Mus. p. 80 (1859); id. Hand-list, ii. p. 164, n. 8321 (1870).

Chrysotis festiva (part.), Finsch, Papag. ii. p. 511 (1868); Pelz. Orn. Bras. p. 265 (part.) (1871); Gieb. Thes. Orn. i. p. 682 (part.) (1872); Tacz. Orn. Pér. iii. p. 222 (part.) (1886).

Androglossa festiva (part.), Rchnw. Journ. f. Orn. 1881, p. 370

(Consp. Psitt. p. 210).

Type. Very much like C. festiva, but with the rump entirely green, and with the bases of the five lateral tail-feathers red.

Hab. Amazons Valley from Barra do Rio Negro to Elvira.

Besides the type specimen, there is in the British Museum a second, which, having the bases of the lateral tail-feathers red, seems referable to C. chloronota, but it has the green feathers of the rump with dark red edges, a feature which does not belong to the immature birds of C. festiva; these often have some entirely green feathers, apparently remains of youth, scattered among the entirely red ones of the rump. Herr von Pelzeln mentions two specimens from Barra do Rio Negro collected by Natterer.

I must confess that, although I have kept this species distinct, I

do not quite understand it.

a. Ad. sk.

Massena Coll. (Type of species.) Salvin-Godman Coll.

b. ♂ ad. sk. Yquitos, Upper Amazons, April (H. Whitely).

## 32. Chrysotis vittata.

Perroquet de St. Domingue, D'Aubent. Pl. Enl. 792. Papegai à bandeau rouge, Buff. Hist. Nat. Ois. vi. p. 241 (1779).

Red-banded Parrot, Lath. Syn. i. p. 300 (1781): id. Gen. Hist. ii. p. 254 (1822).

Psittaeus vittatus, Bodd. Tabl. Pl. Enl. p. 49 (1783); G. R. Gr. Gen. B. ii. p. 421, n. 24 (1846); Sundev. Efv. K. Vet.-Akad.

För. 1869, p. 599.

Psittacus dominicensis, Gm. S. N. i. p. 343, n. 119 (1788); Lath. Ind. Orn. ii. p. 126, n. 131 (1790); Bechst. Kurze Ueb. p. 95 (1811); Vieill. N. D. xxv. p. 328 (1817); id. Enc. Méth. iii. p. 1375 (1823); Cuv. Règn. An. i. p. 465 (excl. syn.) (1829); Wagl. Mon. Psitt. p. 597 (1832); Hahn, Orn. Atl., Papag. p. 70, t. 51 (1836); Hartl. Syst. Verz. Ges. Mus. p. 87 (1844).

Le Perroquet à face rouge (femelle), Levaill. Perr. pl. 108 (ad.),

108 bis (young?) (1805).

Psittacus leucocephalus, part., Shaw, Gen. Zool. viii. 2, p. 517 (1811). Psittacus leucocephalus, fem., Kuhl, Consp. Psitt. p. 80 (1820).

Psittacus festivus?, Moritz, Wiegm. Arch. 1836, i. p. 389.

Chrysotis dominicensis, Bp. Rev. ct Mag. de Zool. 1854, p. 151, n. 88; id. Naumannia, 1856, Consp. Psitt. n. 92; Selat. P. Z. S.

1857, p. 224.

Chrysotis vittata, Bolle, Journ. f. Orn. 1856, p. 170; Sclat. P. Z. S. 1857, p. 224; A. & E. Newt. Ibis, 1859, p. 377; G. R. Gr. List Psitt. Brit. Mus. p. 83 (1859); Taylor, Ibis, 1864, p. 171; Cab. Journ. f. Orn. 1866, p. 190 (note); Finsch, Papay. ii. p. 515 (1868); G. R. Gr. Hand-list, ii. p. 165, n. 8336 (1870); Gieb. Thes. Orn. 1, p. 684 (1872); Sclat. & Salv. Nomenel. Av. Neotrope 112, p. 1412, p. 1412, p. 1412. p. 113, n. 4 (1873); Gundl. Anal. de Hist. Nat. vii. p. 478 (1878); Schmidt, P. Z. S. 1880, p. 311; id. Ibis. 1881, p. 479;

Sclat. List Vert. An. 8th ed. p. 346 (1883); Cory, List B. West Ind. p. 20 (1885); id. Auk, 1886, p. 458; id. Birds W. Ind. p. 181 (1889); Marsh. Papag. p. 55 (1889).

Amazona vittata, Schley. Mus. P.-B. Psittaci, p. 58 (1864); id. op.

cit. Revue, p. 28 (1874).

Chrysotis vittatus, Gundl. Journ. f. Orn. 1874, p. 312; id. Anal. Soc. Esp. Hist. Nat. vii. p. 228 (1878); id. Journ. f. Orn. 1878, pp. 160, 183.

Chrysotis —, Bryant, Pr. Bost. Soc. Nat. Hist. x. p. 256 (1866); id. Journ. f. Orn. 1866, p. 190.

Androglossa vittata, Rehnw. Journ. f. Orn. 1881, p. 371 (Consp. Psitt. p. 211); id. Vogelbild. t. xxxiii. f. 1 (1883).

Adult male. Green, edges of the feathers black, under surface lighter green; under tail-coverts yellowish green; a narrow red band on the forehead; bastard-wing, primary-coverts, and outer webs of the primaries blue; outermost secondaries also blue; tailfeathers green, edged with yellowish at the tip, the lateral ones also on the inner webs; outer webs of the outer tail-feathers blue, the base of the inner webs of the lateral tail-feathers more or less red: bill yellowish; naked skin round the eyes whitish; feet brown fleshcolour; iris yellow. Total length about 12 inches, wing 7.2, tail 4, bill 1.25, tarsus 0.6.

Hab. Porto Rico.

Some specimens have no red at all at the base of the inner web of the lateral tail-feathers.

a. Ad. st. Porto Rico. Zoological Society's Coll. b. Ad. st. Massena Coll. Sclater Coll. c. Ad. sk. Porto Rico. d. Ad. sk. Porto Rico (G. Latimer). Smithsonian Institution [P.]. e. Ad. sk. Porto Rico (G. Latimer). Salvin-Godman Coll. Porto Rico. Zoological Society's f. of ad. sk. Coll.

# 33. Chrysotis pretrei.

Psittacus pretrei, Temm. Pl. Col. 492 (1830); Wagl. Isis, 1831, p. 525; id. Mon. Psitt. p. 601 (1832); Bowrj. Perr. pl. 66 (1837–38); G. R. Gr. Gen. B. ii. p. 421, n. 27 (1846).
Psittacus vernus, Licht. Nomencl. Av. p. 70 (1854).
Chrysotis pretrei, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 98;

Rysons prefer, Bp. Rev. et Mag. de Zool. 1854, p. 181, h. 98; Souancé, Rev. et Mag. de Zool. 1856, p. 154; Bp. Naunannia, 1856, Consp. Psitt. n. 103; G. R. Gr. List Psitt. Brit. Mus. p. 82 (1859); Finsch, Papag. ii. p. 529 (1868); G. R. Gr. Hand-list, ii. p. 164, n. 8328 (1870); Salv. Ibis, 1871, p. 88 (note); Pelz. Orn. Bras. pp. 265 (note), 448 (1871); Gieb. Thes. Orn. i. p. 683 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, 110 (1872) n. 10 (1873); Berl. u. Jhering, Zeitschr. f. ges. Orn. 1885, p. 164; Sclut. P. Z. S. 1889, p. 394; Berl. Journ. f. Orn. 1887, p. 133. Amazona pretrei, Schleg. Mus. P.-B. Psittaci, p. 59 (1864); id. op.

cit. Revue, p. 28 (1874).

Androglossa pretrei, Rehnw. Journ. f. Orn. 1881, p. 373 (Consp. Psitt. p. 213); id. Vogelbild. t. xxxiii. f. 6 (1883).

Adult. Green; head, neck, and under surface brighter; edges of the feathers black; under tail-coverts yellow-green; sinciput, lores, periophthalmic region, edge and bend of the wing, metacarpal edge, bastard-wing, primary-coverts, and thighs red; some of the outermost greater upper wing-coverts red, or marked with red spots; no wing-speculum; quills black, with the outer webs green at the base, blue at the tip; innermost smaller under wing-coverts green; greater under wing-coverts and inner webs of the quills below green; central tail-feathers green, tipped with paler green, lateral feathers green on the basal half, yellow-green on the apical half, the three outermost feathers with small red marks on the inner webs between the green base and the yellowish portion: bill yellow, orange-red towards the base of the upper mandible; feet pale grey; iris yellow. Total length about 13.5 inches, wing 8.7, tail 4.8, bill 1, tarsus 0.62.

Immature birds show less red colour on the wings and round the eyes, where many feathers, red in the adult birds, are green.

Hab. South-eastern Brazil and Rio de la Plata.

a. Imm. sk. b. ♀ ad. sk. Rio de la Plata. Brazil.

Massena Coll. Sclater Coll.

## 34. Chrysotis tucumana.

Chrysotis tueumana, Cab. Journ. f. Orn. 1885, p. 221; ? Berl. Journ. f. Orn. 1887, p. 133.

Very much like C. pretrei from Montevideo, having a red forehead and the primary-coverts also red, but it differs in the bend of wing and metacarpal edge being green without any red, and in the lores and the region behind the eye also without any red, of which there is always a trace even in the young C. pretrei. (Cabanis.)

Hab. Tucuman, Argentine Republic \*.

# 35. Chrysotis albifrons.

White-crowned Parrot, Lath. Syn. i. p. 281, n. 88, var. B (1781);

id. Gen. Hist. ii. p. 236 (1822).

Psittacus albifrons, Sparrm. Mus. Carls. fasc. iii. t. 52 (1787); Lath. Ind. Orn. i. p. 119, n. 113 (1790); Shaw, Gen. Zool. viii. 2, p. 518 (1811); Bechst. Lath. Ueb. p. 95 (1811); Steph. Gen. Zool. xiv. p. 106 (part.) (1826); Desm. Diet. Sc. Nat. xxxix. p. 105 (1826); Cuv. Règn. An. i. p. 465 (1829); Wagl. Isis, 1831, p. 525; id. Mon. Psitt. p. 601 (1832); G. R. Gr. Gen. B. ii. p. 421, n. 26 (1846); Gulliv. P. Z. S. 1875, p. 489.

Psittacus leucocephalus, var.  $\gamma$ , Gm. S. N. i. p. 338 (1788).

Psittacus leucocephalus, part., Shaw, Gen. Zool. viii. 2, p. 517 (1811); Vieill, N. D. xxv. p. 322 (1817); id. Enc. Méth. iii. p. 1371 (1823).

Psittacus erythrops, Cuv. Mus. Paris, fide Less. Tr. d'Orn. p. 200 (1831).

<sup>\*</sup> This species is not mentioned in Sclater's 'Argentine Ornithology.'

Chrysotis albifrons, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 87; Souancé, Rev. et Mag. de Zool. 1856, p. 153; Bp. Naumannia, 1856, Consp. Psitt. n. 91; Souancé, Icon. Pevr. pl. xxx. (1857); Sclat. P. Z. S. 1858, p. 359; G. R. Gr. List Psitt. Brit. Mus. p. 83 (1859); Sclut. & Salv. Ibis, 1859, p. 138; Taylor, Ibis, 1860, p. 121; Finsch, Papag. ii. p. 526 (1868); Lawr. Ann. Lyc. N. Y. ix. p. 131 (1868), p. 207 (1869); Sousa, Mus. Nac. Lisb. Psittaci, p. 11 (1869); Frantz. Journ. f. Orn. 1869, p. 366; Finsch, Abh. nat. Ver. Brem. 1870, p. 352; G. R. Gr. Hand-list, ii. p. 165, n. 8333 (1870); Salv. Ibis, 1871, pp. 87, 96; Lawr. Ibis, 1871, p. 251; Gieb. Thes. Orn. i. p. 679 (1872); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 8 (1873); Salv. Ibis, 1874, p. 327; Lawr. Mcm. Bost. Soc. N. H. ii. p. 296 (Mazatlan) (1874); id. Bull. U.S. Nat. Mus. no. 4, p. 37 (Tehuantepec) (1875); Sclat. P. Z. S. 1875, p. 157; Rehnw. Vogelbild. t. i. f. 8 (1878); Sclat. Ibis, 1880, p. 378, 1881, p. 113; id. List Vert. An. 8th ed. p. 346 (1883); Boucard, P. Z. S., 1883, p. 455; Nutting, Pr. U.S. Nat. Mus. vi. pp. 376, 389 (Nicaragua) (1883); Sulv. Ibis, 1885, p. 192; Salv. & Godm. Ibis, 1889, p. 242.

Amazona albifrons, Schleg. Mus. P.-B. Psittaci, p. 59 (1864); id. op. cit. Revue, p. 28 (1874); Ridgw. Man. N. Am. Birds, p. 588 (1887). Chrysotis apophoenica, Rchnw. Orn. Centralbl. 1880, p. 16 (♀); id. Journ. f. Orn. 1880, p. 111; Sclat. Ibis, 1880, p. 378, 1881, p. 113. Androglossa albifrons, Rchnw. Journ. f. Orn. 1881, p. 375 (Consp. Psitt.

p. 215).

Adult male. Green; feathers of the neck and back with narrow dusky edges; lores and periophthalmic region red; forchead white, sometimes more or less tinged with yellow; vertex blue; upper tail-coverts yellowish green; bastard-wing and primary-coverts bright scarlet; primaries black, with the outer web green at the base and blue towards the tip; secondaries blue on the outer webs; greater under wing-coverts and inner webs of the quills below verditer-green; tail green, with a yellowish-green band at the tip, gradually broader towards the outer tail-feathers; the four outermost tail-feathers with the base red: "iris yellowish white; bill light yellow; cere and feet dull white" (Sumichrast); naked skin round the eyes white. Total length about 10.5 inches, wing 6.3, tail 3.4, bill 1.1, tarsus 0.6.

Young or female. Differs from the adult male in having the

bastard-wing and primary-coverts green, with no red.

Hab. Western Mexico from Sonora to Chiapas, Northern Yucatan, and Guatemala on both sides of the Cordilleras, Nicaragua, and Western Costa Rica.

The specimens from Sonora have a bluish tinge on all the green feathers; the forehead is white, while in the majority from the other localities, except those from Northern Yucatan, the white of the forehead is tinged with yellowish.

a. Ad. st. Mexico.
b. Ad. sk. Mexico.
c-f. ♂ ♀ ad. sk. Quiriego Sonora, Mexico,
April, May (W. Lloyd).
g, h. ♂ ♀ ad. sk. Sierra de Alamos, Sonora,
Mexico, May (W. Lloyd).

Purchased. Purchased. Salvin-Godman Coll.

Salvin-Godman Coll.

Salvin-Godman Coll.  $i, k. \ \beta \ Q \ ad. \ sk.$ Presidio, Mexico, January, March (A. Forrer). Salvin-Godman Coll. Mazatlan, N.W. Mexico, l. ♂ ad. sk. February (F. Bischoff). Acapulco, State of Guerrero, Salvin-Godman Coll. m. Imm. sk. Mexico, September (Mrs. H, H, Smith).Salvin-Godman Coll. *n*−*s*. ♂ ad. sk. Tehuantepec, Mexico, Feb. (W. B. Richardson). Tonala, Chiapas, Mexico, Jan. Salvin-Godman Coll. t. d imm. sk. (W. B. Richardson). Salvin-Godman Coll.  $u, v. \not \in \mathcal{Q}$  ad. sk. Northern Yucatan (G. F.Gaumer). Sclater Coll. w. Ad. sk. Merida, Yucatan, May (G. F.Gaumer).
Sectzotz, Yucatan, April Salvin-Godman Coll. x, y, z. Ad. et Buctzotz, juv. sk. (G. F. Gaumer).a'. Q ad. sk. Salvin-Godman Coll. Retaluleu, Gnatemala (O. Salvin). Sclater Coll. b'. ♂ ad. sk. Rio Chignate, Pacific Coast, Guatemala, December (O. Salvin). c', d'. Q ad. et Rio Chiguate, Pacific Coast, Salvin-Godman Coll. Guatemala, December (O. ad. sk. Salvin). e'. Ad. sk. O. Salvin, Esq. [C.]. Guatemala. f'. Q ad. sk. Guatemala (O. Salvin). Sclater Coll. Salvin-Godman Coll. g', h'.  $\delta \subsetneq ad$ . Motagua, Guatemala Rio sk. (Salvin). Choacuse, Guatemala. i'. Ad. sk. O. Salvin, Esq. [P.]. k'. ♂ ad. sk. Nicoya, Costa Rica, April Salvin-Godman Coll. (Zeledon).

# 36. Chrysotis xantholora.

Psittaeus albifrons, Kuhl (nec Sparrm.), Consp. Psitt. p. 80 (1820);

Steph. Gen. Zool. xiv. p. 106 (part.) (1826). Chrysotis xantholora, G. R. Gr. List Psitt. Brit. Mus. p. 83 (1859); Salv. Ibis, 1861. p. 354; Finsch, Papag. ii. p. 528 (1868); G. R. Gr. Hand-list, ii. p. 165, n. 8334 (1870); Salv. Ibis, 1871, G. R. Gr. Hand-tast, n. p. 165, n. 8554 (1870); Saw. 1018, 1614, pp. 87, 97; Lawr. Ibis, 1871, p. 251; Gieb. Thes. Orn. i. p. 684 (1872); Solat. § Salv. Nomenel. Av. Neotrop. p. 113, n. 9 (1873); Salv. Ibis, 1874, p. 327; Solat. P. Z. S. 1875, p. 157, pl. xxvi., 1876, p. 840; Rehnw. Vogelbild. t. i. f. 9 (1878); Solat. P. Z. S. 1881, p. 996, 1882, p. 786; Boucard, P. Z. S. 1883, pp. 434, 455; Solat. List Vert. An. 8th ed. p. 346 (1883); Salv. Ibis, 1885, pp. 186, 192 (Cozumel Island); Ridgw. Pr. U.S. Nat. Mus. viii. p. 577 (1885); Salv. Ibis, 1889, p. 373; id. Ibis, 1890, p. 88.

Psittacus xantholorus, Schleg. Dierent. p. 66 (1864).

Amazona xantholora, Schleg. Mus. P.-B. Psittaci, p. 59 (1864); id. op. cit. Revue, p. 28 (1874).

Androglossa xantholora, Rehnw. Journ. f. Orn. 1881, p. 375 (Consp. Psitt. p. 215).

Adult male. Green, the edges of the feathers black; lores yellow; sinciput white; vertex blue; periophthalmic region, except in front, and upper part of the cheeks red; ear-coverts black; upper tail-

coverts yellowish green; bastard-wing green, with the tips and inner webs of the feathers edged with blue; smaller upper wingcoverts along the cubital edge and primary-coverts scarlet; first primary black, the next four green at the base and blue towards the tips of the outer webs; inner primaries and secondaries deep blue on the outer webs and at the tips; greater under wing-coverts and inner webs of the quills below verditer-green; two central tailfeathers green, with the tips yellowish green; the lateral ones yellowish green, with the base crimson: bill yellow; feet dull white. Total length 10.5 inches, wing 7, tail 3.3, bill 1.1, tarsus 0.6.

Adult female. Apparently like the male.

Young. Sinciput blue, with no white; lores yellow, with some green scattered feathers; periophthalmic region and cubital edge green, with a few scattered red feathers; primary-coverts entirely green, or some green and some red.

Hab. Yucatan, Cozumel Island, and British Honduras.

Central America.	Sclater Coll.
Central America.	Salvin-Godman Coll.
Honduras.	Mr. Dyson [C.].
	(Type of species.)
Northern Yucatan (G. F.	(Type of species.) Salvin-Godman Coll.
Gaumer).	
Merida, Yucatan, May (G. F.	Sclater Coll.
Gaumer).	
Cozumel Island, Yucatan (G.	Salvin-Godman Coll.
F. Gaumer).	
Cozumel Island, Yucatan (E.	Salvin-Godman Coll.
C. J. Devis).	
Orange Walk, Brit, Hon-	Salvin-Godman Coll.
Gaumer).	
	Central America. Honduras.  Northern Yucatan (G. F. Gaumer). Merida, Yucatan, May (G. F. Gaumer). Cozumel Island, Yucatan (G. F. Gaumer). Cozumel Island, Yucatan (E.

## 37. Chrysotis ventralis.

Psittaeus Martinicanus cyanocephalos, Briss. Orn. iv. p. 251 (1760). Perroquet à ventre pourpre de la Martinique, D'Aubent. Pl. Enl.

Psittacus ventralis, Müll. S. N. Suppl. p. 79 (1776); Cass. Pr. Ac.

Philad. 1864, p. 240.

Le Papegai à ventre pourpre, Buff. Hist. Nat. Ois. vi. p. 242 (1779). Ash-crowned Parrot, Lath. Gen. Syn. i. p. 281, n. 88, var. C (1781). Psittacus leucocephalus, var.  $\delta$ , Gm. S. N. i. p. 338 (1788).

Psittacus leucocephalus, var.  $\gamma$ , Lath. Ind. Orn. i. p. 119 (1790). ? Perroquet à face rouge (mâle jeune âge), Levaill. Perr. pl. 109

(var. ?) (1805). Psittacus leucocephalus, var., Vieill. N. D. xxv. p. 332 (1817); id.

Enc. Méth. iii. p. 1377 (1823).

Psittacus leucocephalus (mas jun.), Kuhl, Consp. Psitt. p. 80 (1820). Psittacus leucocephalus, part., Less. Tr. d'Orn. p. 197 (1831); Wagl.

Mon. Psitt. p. 599 (1832). Chrysotis sallei, Sclat. P. Z. S. 1857, pp. 224, 234; G. R. Gr. List Psitt. Brit. Mus. p. 83 (1859); Sclat. P. Z. S. 1861, p. 79; id. Cat. Am. B. p. 353, n. 2110 (1862); Sousa, Mus. Nac. Lisb. Psittaci, p. 10 (1869); Sclat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 3 (1873);

Sclat. List Vert. An. 8th ed. p. 346 (1883); Cory, Birds Hayti & San Domingo, p. 115 (1885); id. List B. West Ind. p. 20 (1885); id. Auk, 1886, p. 458; id. Birds of W. Ind. p. 181 (1889); Marsh. Papag. p. 55 (1889).

Amazona sallei, Schleg. Mus. P.-B. Psittaci, p. 58 (1864); id. op. cit.

Revue, p. 28 (1874).

Psittacus (Chrysotis) sallei, Bryant, Pr. Bost. Soc. Nat. Hist. xi. p. 96 (1866).

Orn. i. p. 683 (1872); Rehme. Vogelbild. t. xix. f. 4 (1878-83); Cory, Bull. Nutt. Orn. Club, vii. p. 154 (1881). Chrysotis ventralis, G. R. Gr. Hand-list, ii. p. 164, n. 8331 (1870). Androglossa ventralis, Rehme. Journ. f. Orn. 1881, p. 375 (Cousp. Thing and St. 1881). Psitt. p. 215).

Adult. Green, the edges of the feathers black; forehead, lores, and a line under the eyes white; vertex and upper part of the cheeks dull blue; a large patch on the car-coverts black; middle of the abdomen vinous red; thighs bluish; bastard-wing, primarycoverts, and secondaries blue, with bluish-green outer edges; first primary black; outer webs of the remaining primaries deep blue, with lighter edges towards the base: greater under wing-coverts and inner webs of the primaries below verditer-blue; tail green, the lateral feathers with yellow inner webs and red bases; the outer web of the outer tail-feather blue: bill and feet yellow flesh-colour; iris reddish. Total length about 12 inches, wing 7.5, tail 4, bill 1.15, tarsus 0.7.

Female. Like the male. Hab. San Domingo.

a. Ad. sk. San Domingo. b. Ad. sk. San Domingo. c. Ad. sk. San Domingo (Sallé). d. Ad. sk. San Domingo (Cumming). Magua, San Domingo, Jan. (C. B. Cory). e. ♀ ad. sk. f. ♀ ad. sk.

Samana, San Domingo, Sept. (M. A. Frazar).

g. ♂ ad. sk.

h. Ad. st. i. Skeleton. Purchased. M. Sallé [C.]. Sclater Coll. Salvin-Godman Coll. Salvin-Godman Coll.

Salvin-Godman Coll.

Zoological Society's Coll. Massena Coll.

# 38. Chrysotis leucocephala.

The white-headed Parrot, Edw. Birds, iv. pl. 166 (1751). Psittacus viridis capite albo, Edw. Birds, iv. p. 246 (1751).

Psittacus Martinicanus, Briss. Orn. iv. p. 242 (1760).
Psittacus Martinicanus, Briss. Orn. iv. p. 242 (1760).
Psittacus leucocephalus, Lim. S. N. i. p. 145, n. 30 (1766) (ex Aldrov. Orn. i. p. 670); Gm. S. N. i. p. 338, n. 30 (with var. β?) (1788); Lath. Ind. Orn. i. p. 118, n. 111 (var. excl.?) (1790); Shaw, Gen. Zool. viii. 2, p. 517 (part.) (1811); Bechst. Kurze Ueb. p. 95, n. 15 (δ) (1811–12); Vieill. N. D. xxv. p. 322 (part.) (1817); Kyhl. Conse. Psitt. p. 80 (part.) (1820); Vieill. Erg. (1817); Kuhl, Consp. Psitt. p. 80 (part.) (1820); Vieill. Enc. Méth. iii. p. 1371 (part.) (1823); Steph. Gen. Zool. xiv. p. 100 (part.) (1826); Cuv. Règn. An. i. p. 546 (part.) (1829); Voigt,

Cuv. Ueb. p. 742 (1831); Less. Tr. d'Orn. p. 197 (part.) (1831); Wagl. Mon. Psitt. p. 599 (part.) (1832); Hahn, Orn. Atl., Papag. p. 75 (part.) (1836); Hartl. Syst. Verz. Ges. Mus. p. 87 (1844); G. R. Gr. Gen. B. ii. p. 421, n. 25 (part.) (1846); Denny, P. Z. S. 1847, p. 38; Lembeye, Av. de la isle Cuba, p. 132 (1850); Gundl. Repert. Fisico-Nat. Cuba, i. p. 297 (1866); Gulliv. P. Z. S. 1875, p. 489.

Perroquet à front blanc du Sénégal, D'Aubent. Pl. Enl. 335.

Perroquet de la Martinique, D'Aubent. Pl. Enl. 549.

Psittacus gutturalis, Müll. S. N. Suppl. p. 79 (1776); Cass. Pr. Ac. Philad. 1864, p. 240.

L'Amazone à tête blanche, Buff. Hist. Nat. Ois. vi. p. 212 (1779). White-fronted Parrot, Lath. Syn. i. p. 279, n. 88 (1781); id. Gen. *Hist.* ii. p. 235 (1822).

White-headed Parrot, Lath. Gen. Syn. i. p. 280, n. 88, var. A (1781);

id. Gen. Hist. ii. p. 235 (1822).

Le Perroquet à face rouge, Levaill. Perr. pls. 107, 107 bis (var.)

(1805).

Chrysotis leucocephalus, Sw. Class. B. ii. p. 301 (1837); Blyth, Cat. B. As. S. B. p. 2 (1849); Gundl. u. Cab. Journ. f. Orn. 1856, p. 105; Gundl. Journ. f. Orn. 1861, p. 336; Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xv (1863); G. R. Gr. Hand-list, ii. p. 164, n. 8330 (1870); Gundl. Journ. f. Orn. 1874, p. 161; id. Contr. Orn. Cub. pp. 124, 276 (1876); Marsh. Papag. p. 55 (1889).

Chrysotis leucocephala, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 86 (part.); id. Naumannia, 1856, Consp. Psitt. n. 90 (part.); Sclat. P. Z. S. 1857, p. 224 (part.); G. R. Gr. List Psitt. Brit. Mus. p. 82 (1859); Brewer, Pr. Bost. Soc. Nat. Hist. vii. p. 307 (1860); Sclat. P. Z. S. 1861, p. 79; Finsch, Papag. ii. p. 520 (1868); ? Sousa, Mus. 1. Z. S. 1801, p. 13; Prisca, 1 apig. n. p. 520 (1803); 1. Solas, st. Nac. Lisboa, Psittaci, p. 10 (1869); Gieb. Thes. Orn. i. p. 682 (1872); Sclat. § Salv. Nomenel. Av. Neotrop. p. 113, n. 6 (1873); Cab. Journ. f. Orn. 1876, p. 444; Rehnw. Vogelbild. t. xix. f. 5 (1878–83); Schmidt, P. Z. S. 1880, p. 311; Sclat. List Vert. An. 8th ed. p. 346 (1883); Cory, List B. West Ind. p. 20 (1885); id. A. 1886, p. 450 (1985); id. B. West Ind. p. 189 (1985). id. Auk, 1886, p. 459 (part.); id. Birds W. Ind. p. 182 (part.) (1889).

Amazona leucocephala, Schleg. Mus. P.-B. Psittaci, p. 59 (1864); id. op. cit. Revue, p. 28 (1874).

Androglossa leucocephala, Rehnw. Journ. f. Orn. 1881, p. 376 (Consp. Psitt. p. 216).

#### Varieties.

Psitticus (sic) paradisi, ex Cuba, Cat. Carol. i. p. 10, pl. 10 (1754).

Psittacus luteus Insulæ Cubæ, Briss. Orn. iv. p. 308 (1760).

Psittacus paradisi, Linn. S. N. i. p. 147, n. 34 (1760); Gm. S. N. i. p. 342, n. 34 (1788); Lath. Ind. Orn. i. p. 127, n. 132 (1790); Shaw, Gen. Zool. viii. 2, p. 501, pl. 75 (1811); Bechst. Kurze Ueb. p. 97 (1811–12); Shaw, Nat. Misc. xxiii. pl. 1001; Vieill. N. D. xxv. p. 330 (1817); id. Enc. Méth. iii. p. 1376 (1823); Brehm, Mon. d. Papag. t. 58 (1854).

Perroquet de Cuba, D'Aubent. Pl. Enl. 335.

Perroquet jaune écaillé de rouge, Levaill. Perr. pl. 137 (1805).

Psittacus leucocephalus, var.  $\gamma$ , Wagl. Mon. Psitt. p. 600 (1832); Hahn, Orn. Atl., Papag. p. 76 (1836).

Adult. Green, the feathers edged with black; sinciput and lores white; cheeks and throat rosy red; ear-coverts black; abdomen

dull red, with the edges of the feathers green; under tail-coverts yellowish green; bastard-wing, primary-coverts, and outer webs of the quills blue; smaller under wing-coverts green, the greater ones and inner webs of the quills below verditer-blue; tail above green, with the inner webs of the lateral feathers yellowish green towards the tips and red at the bases; outer web of the outer tail-feather blue; bill and cere whitish; feet flesh-colour; iris brownish yellow. Total length about 13 inches, wing 7.5, tail 4.5, bill 1, tarsus 0.65.

Female. Like the male.

Hab. Cuba.

Some specimens show the white feathers of the sinciput tinged with rose-colour.

 $\alpha$ .  $\beta$  ad. sk.Cuba.Zoological Society's Coll.b. Ad. sk.Massena Coll.c. Ad. sk.W. Indies.— Dallas, Esq. [P.].d. Ad. sk.Cuba.Sclater Coll.e. Skeleton.[Martinique.]

f. Sternum and scapular girdle.

## 39. Chrysotis caymanensis.

Chrysotis caymanensis, Cory, Auk, iii. p. 497 (1886); id. Ibis, 1887, p. 125; id. Birds of W. Ind. p. 297 (1889).

"Resembles C. leucocephalus, but differs from that species greatly in the markings of the throat and head; forehead dull yellowish white, not reaching the eye; feathers of the head bluish green, tipped and edged with dull black; cheeks bright erimson-red, the feathers mixed with green in some specimens; throat pale red, the feathers broadly edged with yellow; underparts bluish green, marked with dull red on the sides and belly; the feathers of the breast and belly edged with dull black; quills heavily edged with blue on the outer webs, inner webs dark brown; tail yellowish green, the outer web of outer feather pale blue, the basal portion of inner webs heavily marked with dark red. Length 11 inches, wing 8, tail 5, tarsus 0.70, bill 1.05." (Cory.)

Hab. Grand Cayman, West Indies.

a. Q imm. sk. Grand Cayman, Aug. (W. R. Richard-son).

The only specimen examined is immature and in bad condition, so that I have been obliged to copy Cory's description.

## 40. Chrysotis bahamensis.

Psittacus (Chrysotis) collarius (var. bahamensis), Bryant, Pr. Bost. Soc. Nat. Hist. xi. p. 65 (1866).

Chrysotis collaria, Cory (nec Linn.), Birds Bahama Isl. p. 123 (1880); Bolle, Journ. f. Orn. 1883, p. 107. Chrysotis leucocephala, part., Cory, Auk, 1886, p. 459; id. Birds of W. Ind. p. 182 (1889). Chrysotis bahamensis, Cory, Auk, 1886, p. 460; id. B. of W. Ind. p. 183 (1889).

"The Bahama bird differs from the above (C. leucocephala) by showing very little red on the belly, sometimes nearly absent; more red on the erissum and under wing-coverts (!); tail bluish green, the red markings shown only on the two outer feathers." (Cory.)

Hab. Fortune Island, Acklin Island, and Inagua, Bahamas.

## 41. Chrysotis collaria.

Psittacus minor, collo miniaceo, Sloane, Voy. of Jam. ii. p. 297. Psittacus Jamaicensis gutture rubro, Briss. Orn. iv. p. 241 (1760). Psittacus collarius, Linn. S. N. i. p. 149, n. 42 (1766); Gm. S. N i. p. 347, n. 42 (1788); Lath. Ind. Orn. i. p. 128, n. 139 (1790); Bechst. Kurze Ueb. p. 104 (1811–12); Vieill. N. D. xxv. p. 330 (1817); Kuhl, Consp. Isitt. p. 95 (1820).

Red-throated Parrot, Lath. Syn. i. p. 303, n. 109 (1781); id. Gen.

Hist. ii. p. 260 (1822).

Psittacus leucocephalus, part., Shaw, Gen. Zool. viii. 2, p. 517, pl. 78 (1811); Bechst. Kurze Ueb. p. 95 (1811); Kuhl, Consp. Psitt. p. 80 (1820); Wagl. Mon. Psitt. p. 600 (1832); Hahn, Orn. Atl., Papag. p. 76 (1836); G. R. Gr. Gen. B. ii. p. 421, n. 25 (1846). Pionus vinaceicollis, Lafr. Rev. Zool. 1846, p. 321.

Psittacus leucocephalus, Gosse (nec Linn.), B. of Jam. p. 269 (1847). Psittacus vinaceicollis, G. R. Gr. Gen. B. iii. App. p. 20 (1849).

 Chrysotis leucocephala (part.?), Bp. Rev. et May. de Zool. 1854,
 p. 151, n. 86?; Souancé, Rev. et Mag. de Zool. 1856, p. 153;
 Bp. Naumannia, 1856, Consp. Psitt. n. 90 (part.?); Sclat. P. Z. S. 1857, p. 224 (part.).

Chrysotis vinaceicollis, Selat. P. Z. S. 1857, p. 225.

Chrysotis collaria, G. R. Gr. List Psitt. Brit. Mus. p. 83 (1859); hrysotis collaria, G. R. Gr. List Psitt. Brit. Mus. p. 83 (1859); Selat. P. Z. S. 1861, p. 79; id. Cat. Am. B. p. 353, n. 2111 (1862); Albr. Journ. f. Orn. 1862, p. 203; March, Pr. Ac. Nat. Sc. Philad. 1863, p. 284; Finsch, Papag. ii. p. 517 (1868); G. R. Gr. Hand-list, ii. p. 164, n. 8332 (1870); Gieb. Thes. Orn. i. p. 681 (1872); Selat. & Salv. Nomenel. Av. Neotrop. p. 113, n. 5 (1873); Garr. P. Z. S. 1874, p. 587; A. & E. Newt. Handb. Jam. p. 110 (1881); Selat. List Vert. An. 8th ed. p. 346 (1883); Cory, List B. West Ind. p. 20 (1885); id. Auk, 1886, p. 459; id. Birds W. Ind. p. 182 (1889); Marsh. Papag. p. 55 (1889). ndroglossa collaria. Rehmv. Journ. f. Orn. 1881, p. 376 (Coren.

Androglossa collaria, Rehnw. Journ. f. Orn. 1881, p. 376 (Consp.

Psitt. p. 216); id. Vogelbild. Nachtr. 126 (1883).

Adult. Green, the feathers of the occiput and nape distinctly edged with black; forehead white, vertex tinged with blue; neck, cheeks, and throat dull reddish; feathers of the neek with a green band near the black edges; a white line borders the cheeks below the eyes; upper part of the cheeks tinged with bluish green, the feathers of the cheeks edged with green; upper and under tailcoverts yellowish green; bastard-wing, primary-coverts, and outer webs of the quills blue, paler than in C. leucocephala; secondaries edged with green on the outer webs; under wing-coverts and inner webs of the quills below green; tail green, with the tip yellowgreen; the lateral tail-feathers with the inner web yellow on the apical half, red on the basal one; outer tail-feathers blue on the outer web: bill and cere whitish; feet flesh-colour or ochraceous. Total length about 12 inches, wing 7.3, tail 4.3, bill 1.1, tarsus

Female. Like the male. Hab. Jamaica.

a. Ad. sk.	Jamaica.	Gosse [C.].
b. of ad. sk.	Jamaica (Osburn).	Sclater Coll.
c. Ad. sk.	Monegue, Jamaica (O. Sal-	Salvin-Godman Coll.
	vin).	
d. 3 ad. sk.	Spanishtown, Jamaica, Mar.	Salvin-Godman Coll.
	( W. T. March).	
e. ♀ ad. sk.	Near Spanishtown, Jamaica,	Smithsonian Institution
	January (W. T. March).	[P.]
$f, g. \ \mathcal{J} \text{ ad. sk.}$	Jamaica.	Zoological Society's Coll.

## 42. Chrysotis agilis.

The Little Green Parrot, Edw. Birds, iv. pl. 168 (1751). Psittacus minor viridis, Edw. Birds, iv. p. 246 (1751). Psittacus Cayanensis, Briss. Orn. iv. p. 237 (1760).

Psittacus agilis, Linn. S. N. i. p. 143, n. 20 (1766); Gm. S. N. i. p. 330, n. 20 (syn. emend.; 1788); Lath. Ind. Orn. i. p. 106, n. 73 (1790); Bechst. Kurze Ueb. p. 82, t. 17 (1811); Vieill. N. D. xxv. p. 324 (1817); id. Enc. Meth. iii. p. 1372 (1823); Wagl. Mon. Psitt. p. 597 (1832); G. R. Gr. Gen. B. ii. p. 421, n. 23 (1846); Gosse, B. of Jam. p. 266 (1847).

Agile Parrot, Lath. Syn. i. p. 297, n. 101 (1781); id. Gen. Hist. ii. p. 195, with var. A (1822).

Le Petit Perroquet vert, Levaill. Perr. pl. 105 (1805); Vieill. N. D. xxv. p. 314 (1817).

Psittaeus signatus, Shaw, Gen. Zool. viii. 2, p. 510 (1811); Kuhl. Consp. Psitt. p. 71 (1820); Steph. Gen. Zool. xiv. p. 102 (1826); Voigt, Cuv. Uebers. p. 739 (1831).

Psittacus virescens, Bechst. (nec Linn.) Kurze Ueb. p. 99 (1811-12). Psittacus æstivus, part., Kuhl, Consp. Psitt. p. 75 (1820).

? Modest Parrot, *Lath. Gen. Hist.* ii. p. 196 (1822). Psittacus minor, Vieill. Enc. Méth. iii. p. 1367 (1823). Chrysotis signatus, Sw. Class. B. ii. p. 301 (1837).

Chrysotis agilis, G. R. Gr. List Psitt. Brit. Mus. p. 82 (1859); Sclat. Albrecht, Journ. f. Orn. 1862, p. 203; March, Pr. Acad. Nat. Sc. Philad. 1863, p. 284; Finsch, Papag. ii. p. 531 (1808); G. R. Gr. Hand-list, ii. p. 164, n. 8329 (1870); Gieb. Thes. Orn. i. p. 679 (1872); Selat. & Salv. Nomencl. Av. Neotrop. p. 113, n. 11 (1873); Sclat. P. Z. S. 1873, p. 811; Garr. P. Z. S. 1874, p. 587; A. S. E. Newt. Handb. Jamaica, p. 110 (1881); Sclut. P. Z. S. 1882, p. 801; id. List Vert. An. 8th ed. p. 347 (1883); Cory, List Birds W. Ind. p. 20 (1885); id. Auk, 1886, p. 461; id. Birds of

W. Ind. p. 183 (1889); Marsh. Papag. p. 55 (1889).
 Androglossa agilis, Rehnw. Journ. f. Orn. 1881, p. 367 (Consp. Psitt. p. 207); id. Vogelbild. Nachtr. 117 (1883).

Adult male. Green; darker, and with a bluish tinge, on the top of the head, a little lighter on the underparts; the under tail-coverts vellowish green; feathers of the neck slightly edged with black; primary-coverts red; first primary black, the remainder with the outer webs, especially at the base, blue, edged with green; secondaries blue, with the base of the outer webs green; greater under wingcoverts and part of the inner webs of the quills below verditer-green; tail green, with the base of the inner webs of the lateral feathers red; the outer tail-feathers bluish on the outer web: "bill greyish black, with a pale spot at the base of the upper mandible; feet greyblack; iris dark brown; cere blackish grey" (Gosse). Total length 10.5 inches, wing 6.9, tail 3.5, bill 1.05, tarsus 0.63.

Young. Has no red on the primary-coverts, which are green, and

no bluish tinge on the pileum.

Hab. Jamaica.

a, b. Ad. st.	Jamaica.	P. Gosse [C.].
c. of ad. sk.	Freeman's Hall, Trelawny,	Salvin-Godman Coll.
	June (W. Osburn).	
d. Ad. sk.	Jamaica (W. Osburn).	Sclater Coll.
e. o juv. sk.	Spanishtown, Mar. (W. T.	Smithsonian Institution
c. 0 Jun 521	March).	[P.].
f Ctonnam	Jamaica,	P. Gosse [C.].
f. Sternum.	Jamaica,	1. dosse [O.].

#### 18. PACHYNUS.

Type. Graydidascalus, Bp. Rev. et May. de Zool, 1854, p. 142. P. brachyurus. Graydidactylus, Bp. Naumannia, 1856, Consp. Psitt. 

Runge. Upper Amazons.

# 1. Pachynus brachyurus.

Psittacus brachyurus, Temm. & Kuhl, in Kuhl, Consp. Psitt. p. 72 (1820); Steph. Gen. Zool. xiv. p. 103 (1826); G. R. Gr. Gen. B. ii. p. 421, n. 20 (1846); iil. List Psitt. Brit. Mus. p. 76 (1859). Psittacus viridissimus, Sw. Zool. Ill. pl. 155 (1822-23); Isis, 1829,

p. 1005.

Psittacus pumilio, Spix, Av. Bras. i. p. 41, t. xxix. f. 2 (1824); Brehm, Mon. d. Papag. t. 56.

Pionus brachyurus, Wagl. Mon. Psitt. p. 613 (1832); Burm. Syst. Ueb. ii. p. 194 (1856).

Psittacus pumilio Spixii, Bourj. Perr. pl. 56 (1837-38).

Graydidascalus viridissimus, Bp. Rev. et Mag. de Zool. 1854, pp. 147, 152, n. 122; Souancé, Rev. et Mag. de Zool. 1856, p. 156; Sousa, Mus. Nac. Lisboa, Psittaci, p. 13 (1869); G. R. Gr. Hand-list, ii. p. 162, n. 8297 (1870).

Graydidactylus viridissimus, Bp. Naumannia, 1856, Consp. Psitt.

n. 121.

Amazona brachyura, Schleg. Mus. P.-B. Psittaci, p. 56 (1864); id. op. cit. Revue, p. 30 (1874).

Pionias brachyurus, Finsch, Papag. ii. p. 410 (1868); Pelz. Orn. Bras. pp. 262, 447, liii (1871); Gieb. Thes. Orn. iii. p. 189 (1877). Pionopsitta brachyura, Salv. Ibis, 1876, p. 496; Berl. Journ. f. Orn. 1889, p. 100.

Pachynus brachyurus, Rehnw. Journ. f. Orn. 1881, p. 353 (Consp. Psitt. p. 193); id. Vogelbild. t. xxxiii. f. 7 (1883); Tacz. Orn. Pér. iii. p. 216 (1886).

Adult male. Green; tail-coverts and underparts paler, yellowish green; primaries and their coverts darker green; secondaries and greater wing-coverts edged with yellowish green; on the smaller wing-coverts, along the cubital edge, a dark red patch; under wing-coverts green edged with yellowish green, the greater ones and inner webs of the quills verditer-green; tail yellowish green, the two central feathers greener, the lateral ones with a red band near the base: bill dusky horn-grey; feet brown; "iris red" (Whitely). Total length 8.75 inches, wing 5.55, tail 2.4, bill 1, tarsus 0.55.

Female. Like the male.

Young. According to Wagler, the red band towards the base of the tail is wanting.

Hab. Upper Amazons and Ecuador.

a. Ad. st.	Brazil.	Zoological Society's
, , , , ,		Coll.
$b$ . $\mathcal{J}$ ad. sk.	Samiria, Upper Amazons, Octo-	Salvin-Godman Coll.
c. ♀ ad. sk.	ber (J. Hauxwell).	Salvin-Godman Coll.
c. 4 au. sk.	Yquitos, Upper Amazons, May (H. Whitely).	Salvin-Godman Coll.
d. 3 ad. sk.	Barra do Rio Negro, November	Sclater Coll.
0	(Natterer).	10010001 0 (71)

#### 19. PIONUS.

Type.

Cf. Sclater, Rowl. Orn. Misc. iii. pp. 5-9, pls. lxxx., lxxxi.

Range. From Southern Mexico and Central America to Paraguay and Argentine Republic.

# Key to the Species.

a. Primaries and their wing-coverts green.
a'. Head entirely blue, or with all the feathers edged with blue ............./ menstruas, p. 322.
b'. Head not entirely blue, or with no blue at all.
a''. Cheeks green.
a'''. Bill red.
a<sup>1</sup> Bill red, with the base of the culmen dusky; breast and abdomen earthy or dirty olive ...
b<sup>4</sup> Bill entirely coral-red; breast

and abdomen green ......

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ecrallinus, p. 326.

b'". Bill yellow, with the base dusky.  $c^4$ . Chin and band across the lower √ maximiliani, p. 327. throat blue ..... d4. Chin and band across the lower bridgesi, p. 329. throat purple vinous ...... b". Cheeks not green; bill yellow; bases of the feathers of the head white. . Head and chin vinous red ...... tumultuosus, p. 330. d'''. Sinciput white, with the feathers edged with pale red; cheeks white, with the feathers edged seniloides, p. 330. with dusky ..... b. Primaries and their wing-coverts blue. c'. Pileum and lores white; back green ... senilis, p. 331. d'. Pileum and lores dark, with no white. e'''. Inner webs of the quills below verditer-blue; base of the tail with no red colour..... ehalcopterus, p. 333. f'''. Inner webs of the quills below deep blue; base of the tail-feathers on the inner webs and below broadly red ..... fuscus, p. 334.

## 1. Pionus menstruus.

Psittacus Guianensis cyanocephalos, Briss. Orn. iv. p. 247 (1760) (excl. syn.).

Blue-headed Parrot, Edw. Glean. vii. p. 226, pl. 314 (1764); Lath. Syn. i. p. 301 (1781); id. Gen. Hist. ii, p. 221 (1822).

Psittacus capite cæruleo, Edw. Glean. vii. p. 325 (1764). Psittacus menstruus, Linn. S. N. i. p. 148, n. 39 (1766); Gm. S. N. i. p. 345, n. 29 (1788); Lath. Ind. Orn. i. p. 113, n. 95 (1790); Shaw, Gen. Zool. viii. p. 540 (1811); Bechst. Kurze Ueb. p. 91 (1811-12); Vieill. N. D. xxv. p. 331 (1817); Kuhl, Consp. Psitt. p. 72 (part.) (1820); ? Wied, Reise, i. p. 175 (1820), ii. p. 341 (1821); ? Spix, Av. Bras. i. p. 46 (1824); Steph. Gen. Zool. xiv. p. 103 (1826); Voigt, Cuv. Uebers. p. 740 (1831); ? Wied, Beitr. iv. p. 237 (1832); Hahn, Orn. Atl. p. 59, t. 44 (1836); G. R. Gr. Gen. B. p. 421, n. 9 (1846); Cub. in Schomb. Guiana, iii. p. 723 (1848); Brehm, Mon. d. Papag. t. 48 (nec 61) (1854); G. R. Gr. List Psitt. Brit. Mus. p. 75 (1859); Léotaud, Ois. de l'île de la Trinidad, p. 329 (1866); Gulliv. P. Z. S. 1875, p. 489. Psittacus cyanocephalus, Scop. (nec Linn.) Annus I. Hist. Nat.

p. 33 (1769).

Perroquet à tête bleue de la Guiane, D'Aubent. Pl. Enl. 384.

Papegai à tête et gorge bleue, Buff. Hist. Nat. Ois. vi. p. 243 (1779).

Psittacus evanogula, Bodd. Tabl. Pl. Enl. p. 23 (1783).

Perroquet à camail bleue, mâle, Levaill. Perr. pl. 114 (1805). Papegai à tête bleue, Vieill. Enc. Méth., Atl. pl. 229. f. 1 (1823).

Psittacus purpureus (mâle), Less. Tr. d'Orn. p. 198 (1831).

Pionus menstruus, Wagl. Mon. Psitt. p. 602 (1832) (part.?); Hartl. Syst. Verz. Ges. Mus. p. 87 (1844); Blyth, Cat. B. Mus. A. S. B. p. 3 (1849); Bp. Rev. et Mag. de Zool. 1854, pp. 148, 151, n. 114; ? Souancé, Rev. et Mag. de Zool. 1856, p. 155 (Brésil); Bp. Naumannia, 1856, Consp. Psitt. n. 113; Burm. Syst. Ueb. ii.

p. 190 (1856); Sclat. P. Z. S. 1857, pp. 19, 266, 1858, p. 460, 1860, p. 287; \*Burm. Journ. f. Orn. 1860, p. 243; id. Reise, ii. p. 443 (1861); Sclat. Cat. Am. B. p. 354, n. 2117 (1862); Sclat. & Salv. P. Z. S. 1864, p. 368; Salv. P. Z. S. 1867, p. 158; Sclat. & Salv. P. Z. S. 1867, pp. 588, 595, 753; Sousa, Mus. Nac. Lisb. Psittaci, p. 12 (1869); G. R. Gr. Hand-list, ii. p. 162, n. 8299 (syn. emend.) (1870); Salv. P. Z. S. 1870, p. 214; id. Ibis, 1871, pp. 87, 95; Sclat. & Salv. P. Z. S. 1873, pp. 186, 300; iid. Nomencl. Av. Nectrop. p. 114, n. 1 (partim?) (1873); Garrod, P. Z. S. 1873, pp. 466, 634, 1874, p. 587; Sclat. Rowl. Orn. Misc. iii. pp. 6, 7 (part.) (1877); Sclat. & Salv. P. Z. S. 1879, pp. 538, 635; Salv. Cat. B. Strickl. Coll. p. 467 (1882); Sclat. List Vert. An. 8th ed. p. 351 (1883); Tacz. & Berl. P. Z. S. 1885, p. 119; Zeled. Pr. U.S. Nat. Mus. viii. p. 111 (1885); Salv. Ibis, 1886, p. 69; Tacz. Orn. Pér. iii. p. 218, Tabl. p. 100 (1886); Garlepp, Journ. f. Orn. 1889, p. 291; Berl. Journ. f. Orn. 1889, p. 317.

? Psittacus maximiliani, Cab. in Schomb. Guian. iii. p. 723 (1848)

(perhaps the young bird).

Pionus maximiliani (part.), G. R. Gr. List Psitt. Brit. Mus. p. 75, specim. a (1859) (juv.).

? Pionius menstruus, Lawr. Ann. Lyc. N. Y. vii. p. 299 (1861).

Amazona menstrua, Schley. Mus. P.-B. Psittaci, p. 60 (1864); id.

op. cit. Revue, p. 28 (1874).

Pionias menstruus, Finsch, Papag. ii. p. 441 (partim) (1868);
id. P. Z. S. 1870, p. 586; Pelz. Orn. Bras. pp. 264, 447, liii
(1871); Pelz. Ibis, 1873, p. 32; Gieb. Thes. Orn. iii. p. 191
(partim) (1877); Rehnw. Vogelbild. t. xxvi. f. 4 (1878-83); id. Journ. f. Orn. 1881, p. 362 (Consp. Psitt. p. 202).

Pionus rubrigularis, Cab. Orn. Centralbl. 1881, p. 70; id. Journ. f. Orn. 1881, p. 222; Rehnw. u. Schal. Journ. f. Orn. 1882, p. 119.
Pionus menstruus rubrigularis, Cab. Journ. f. Orn. 1881, p. 222.

Pionias rubrigularis, Rehnw. Vogelbild. in the text of pl. xxvi. f. 4 (1878-83); id. Journ. f. Orn. 1881, p. 202 (Consp. Psitt. p. 202).

Adult male. Green, upper wing-coverts in some lights golden brown-olive; head and neck blue; a patch on the ear-coverts black; feathers of the throat with the bases pink-red, producing a pinky-red patch more or less hidden; feathers of the upper breast green, more or less tinged with olive-brown, and edged with blue; under tail-coverts pink-red, with the tips green, more or less bluish; greater under wing-coverts and inner webs of the quills below grass-green; outer web of the first primary edged with greenish blue; central tail-feathers green, the lateral ones with the outer webs bright blue, or blue towards the tips and green towards the base, and with the inner webs green towards the tip and red at the base: bill blackish, with a red patch at the base of the upper mandible; cere greyish; feet grey; iris brown. Total length about 11 inches, wing 7.6-7.2, tail 3, bill 1.03, tarsus 0.6.

Female. Like the male.

Young. Greener on the head, neck, and upper breast, where the blue colour on the edges of the feathers is less developed than in the adult birds; sometimes a pinkish band mixed with blue on the forehead.

The specimens from Central America and Peru have been separated by Dr. Cabanis as *P. rubrigularis*, but I do not find that they have the red gular patch more conspicuous than those from other localities.

The Ecuador and Peru birds are much the largest.

A single specimen from Bolivia, mentioned below, perhaps deserves specific separation, having the feathers of the breast decidedly brown with blue edges.

Hab. From Costa Rica to Colombia, Trinidad, Guiana, Amazon

Valley, Ecuador, Peru, and, if the same, also Bolivia.

South America. a. Ad. st. b, c. Q ad. sk. d. d ad. sk. Bugaba, Chiriqui (Arcé). Santa Fé, Veragua (Arcé). Veragua (Arcé). Calobre, Veragua (Arcé). e. 3 ad. sk. f. of ad. sk. g. Ad. sk. Panama. Chepo, Isthmus of Panama. h, i. Ad. sk.  $k. \ \$ imm. sk. Isthmus of Panama (McLeannan).Panama. l. ♀ juv. sk. m. Ad. sk. Bogota. Roraima, British Guiana, Jan. n. 3 ad. sk. (H. Whitely). Bartica Grove, British Guiana, Jan. (H. Whitely). o. 3 ad. sk. Barra do Rio Negro (Wallace). p. Ad. sk. Rio Tocantins, Amazons, Sept. q. Ad. sk. (Wallace). r, s, t.  $\delta$  ad.; u.  $\circ$  ad. sk. Chapada, Matto Grosso, Brazil, Feb. & April (H. H. Smith). v. Ad. sk. Maranham (R. Wendeborn). Brazil. w. Juv. st. Rio Javari. *x*. Ad. sk. y, z. Ad. sk. Sarayacu, Ecuador (Buckley). a'. o ad. sk., Cosnipata, Peru, May (H. Whitely). var. b'. Ad. sk., var. Pillon, Bolivia (C. Buckley).

Baron Laugier's Coll.
Salvin-Godman Coll.
Salvin-Godman Coll.
Sclater Coll.
Salvin-Godman Coll.
Tweeddale Coll.
Salvin-Godman Coll.
Salvin-Godman Coll.
Purchased.
Sclater Coll.
Salvin-Godman Coll.

Salvin-Godman Coll.
Sclater Coll.

Salvin-Godman Coll.
Salvin-Godman Coll.

Salvin-Godman Coll. Purchased. H. W. Bates [C]. Salvin-Godman Coll. Tweeddale Coll.

Salvin-GodmanColl.\*

## Pionus reichenowi.

Pionias reichenowi, Heine, Journ. f. Orn. 1884, p. 264 (Northern Brazil or Peru); Heine u. Rchnw. Nomenel. Mus. Hein. Orn. p. 232 (1890).

Adult. Olive-green, the feathers of the upper back edged with bluish, the head dull blue, the feathers of the lower neck and breast olive, broadly edged with blue; also the green-olive feathers of the abdomen are edged with blue; outer webs of the tail-feathers blue, the inner ones towards the base pale red, towards the tip greenish blue; under tail-coverts red, blue in the middle, greenish at the tip: bill yellowish, the base of the under mandible and the sides of the upper dusky; feet dusky. Total length 330 mm., wing 180, tail 85, culmen of the bill 30. (Heine.)

Hab. Peru or Northern Brazil.

<sup>\*</sup> I have not been able to make out satisfactorily the following two species:-

## 2. Pionus sordidus.

The Dusky Parrot, Edw. Birds, iv. pl. 167 (1751); Lath. Gen. Syn. i. p. 304 (1781); id. Gen. Hist. ii. p. 223 (with var. A) (1822). Psittacus fuscus Mexicanus, Edw. Birds, iv. p. 246 (1751).

Psittacus Novæ Hispauiæ, *Briss. Orn.* iv. p. 303 (1760).
Psittacus sordidus, *Linn. S. N.* i. p. 148, n. 49 (1766); *Gm. S. N.* i. p. 343, n. 40 (1788); Lath. Ind. Orn. i. p. 127, n. 135 (1790); Bechst. Kurze Ueb. p. 102 (1811–12); Vieill. N. D. xxv. p. 329 (1817); Kuhl, Consp. Psitt. p. 74 (1820); Vieill. Enc. Méth. iii. p. 1375 (1820); Steph. Gen. Zool. xiv. p. 104 (1826); Voigt, Cuv.

Obs. According to Heine, this species differs from P. menstruus in the following points: -(1) The head is blackish blue and not pure blue; (2) the feathers of the upper back are margined with blue; (3) the bases of the feathers of the throat are not red; (4) the blue margins of the feathers of the underparts extend all over the abdomen and vent; (5) the middle part of the under tail-coverts is blue and not green.

I have kept P. reichenowi distinct from P. menstruus, but I am not quite sure that the bird described by Heine is not an individual variety of that species. The same remark applies to the following specimens, which, except one which has the red gular patch and a bright blue head, seem to agree with

Heine's description nearly in every respect.

a. Ad. sk. b, c, d. Sk.

South America.

Massena Coll. Purchased.

#### Pionus cobaltinus.

Psittaeus cobaltinus, Mass. et Souancé, Rev. et Mag. de Zool. 1854, p. 74 (Colombia).

Pionns cobaltinus, Bp. Rev. et Mag. de Zool. 1854, pp. 148, 151, n. 115; Sclat. P. Z. S. 1855, p. 163.

Pionus maximiliani, part., Sonancé, Rev. et Mag. de Zool. 1856, p. 155.

Young (type). Green, back and wings with an olive tinge; forehead rosy red, mixed with blue; feathers of the head green, with narrow blue edges; edges of the feathers of the underparts blue; under tail-coverts pale red, with the middle part of each feather greenish; tail and wing as in P, menstruus; bill yellowish; feet dusky. Total length 9.5 inches, wing 6.7, tail 2.6, bill 0.9, tarsus 0.52.

Hab. Colombia. Obs. The type specimen of P. cobaltinus is no doubt a young bird, as shown by the red frontal band. Although in some points it agrees with *P. menstruus*, I have not been able to identify it with that or any other known species. De Souancé, in his paper on the Parrots of the Massena Collection, has identified the bird with P. maximiliani, but I do not think that it can be attributed to that species on account of the blue on the cheeks and underparts; the vellowish bill shows that the bird is not P. menstruus. The blue edges to the feathers of the underparts, extending as far as the under tail-coverts, show a resemblance between P. cobaltinus and P. reichenowi, Heine, with which it may be identical.

Having only a young bird to go by, I cannot give a decided opinion con-

cerning P. cobaltinus.

Colombia. a. Juv. sk.

Massena Coll. (Type of species.) Uebers, p. 740 (1831); G. R. Gr. Gen. B. ii, p. 421, n. 14 (1846);

id. List Psitt. Brit. Mus. p. 75 (part.?) (1859). Papegai brun, Buff. Hist. Nat. Ois. vi. p. 246 (vii. p. 198, 1783).

Le Perroquet brun, Levaill. Perr. pl. 104 (1805).

Pionus sordidus, Wagl. Mon. Psitt. p. 607 (1832); Sclat. P. Z. S. 1862, p. 323 (?), 1868, p. 169; G. R. Gr. Hand-list, ii. p. 162, n. 8300 (excl. syn.) (1870); Sclat. P. Z. S. 1873, p. 811; Scl. & Salv. Nomencl. Av. Neotrop. p. 114, n. 4 (1873); Garrod, P. Z. S. 1874, p. 587; Sclat. Rowl. Orn. Misc. iii. pp. 6, 7, 8 (1877); Sclat. List Vent. An. 225 (1882) List Vert. An. 8th ed. p. 352 (1883).

Chrysotis sordidus, Sw. Class. B. ii. p. 301 (1837).

Pionias sordidus, Finsch, Papay. ii. p. 452 (part.), p. 956 (1868); Gieb. Thes. Orn. iii. p. 193 (part.) (1877); Rehnw. Voyelbild. t. x. f. 4 (1878-83); id. Journ. f. Orn. 1879, p. 212, 1881, p. 363 (Consp. Psitt. p. 203).

Adult. Above olive-green, the feathers of the head with dark blue edges, those of the cheeks olive with blue tips; chin and a band across the throat, produced by the edges of the feathers, blue; breast and abdomen dirty olive; under tail-coverts red; quills and primary-coverts green, the first primary edged with blue on the outer web; greater under wing-coverts and inner webs of the quills below malachite-green; central tail-feathers green, the lateral ones blue on the outer webs and red towards the base of the inner ones; tail underneath green, with the base of the lateral feathers red: bill red, with the base of the eulmen dusky, and with a vellowish tinge at the base of the upper mandible, near the tomia; feet dusky. Total length about 11 inches, wing 7.3, tail 3.3, bill 1, tarsus 0.6.

Hab. Venezuela.

Of the three specimens in the British Museum, the one I have described is the largest, and of an olive-green colour above, nearly uniform except on the head; the second is smaller and of a purer olive-colour below, and has the feathers of the upper parts with distinct lighter edges: the third specimen is about the size of the second, and has been kept distinct by Mr. Sclater on account of "the whole back, nape, and wing-coverts being of a sordid yellowish olive-colour, with the edgings of the feathers lighter"; but it appears to me to have the plumage faded and worn out.

 Ad. sk. b. ♂ ad. sk. c. d imm. sk.

Venezuela. Venezuela (Goering). Massena Coll. Zoological Society's Coll. Sclater Coll.

#### 3. Pionus corallinus.

Pionus eorallinus, Bp. Rev. et Mag. de Zool. 1854, pp. 148, 152, n. 118; id. Naumannia, 1856, Consp. Psitt. n. 115 (exel. syn.); Sclat. P. Z. S. 1859, p. 147; id. Cat. Am. B. p. 355, n. 2119 (1862); ? Sousa, Nac. Mus. Lisb. Psittaci, p. 12 (1869); Sclat. & Salv. Nomenci. Ar. Neotrop. p. 114, n. 3 (1873); Sclat. Rowl. Ovn. Misc. iii. pp. 6, 7, 8, pl. lxxx. (1877); Forbes, Ibis, 1879, p. 307 (note); Berl. & Tacz. P. Z. S. 1884, p. 309; Tacz. & Berl. P. Z. S. 1885, p. 109.

P Pionus sordidus, Souancé (nec Linn.), Rev. et Mag. de Zool. 1856,

Psittacus sordidus, G. R. Gr. List Psitt. Brit. Mus. p. 75, specim. a (1859).

Psittacus siy (part.), G. R. Gr. List. Psitt. Brit. Mus. p. 75, specim, d (1859).

Amazona sordida, Schleg. (nec Linn.) Mus. P.-B. Psitt. p. 61

(1864); id. op. cit. Revue, p. 28 (1874).

Pionus corallirostris, Bp., fide Schley. Mus. P.-B. Psittaci (in syn. A. sordidæ), p. 61 (1864); Mass. in Mus. Brit., fide Finsch, Papag. ii. p. 454 (1868); Mass. et Souancé, fide G. R. Gr. Handlist, ii. p. 162, n. 8301 (1870).

Pionias sordidus, part., Finsch, Papag. ii. p. 452 (1868); Gieb. Thes. Orn. iii. p. 193 (part.) (1877).

Pionias corallinus, Rehnw. Vogelbild. t. xxvi. f. 1 (1878-83); id. Journ. f. Orn. 1881, p. 363 (Consp. Psitt. p. 203).

Adult. Dull green; the feathers of the head edged with bluish; feathers of the interscapular region with bluish dusky edges, preceded by a greyish tinge; chin and a band across the upper breast, formed by the edges of the feathers, blue; under tail-coverts red, with dark shafts; great under wing-coverts and inner webs of the quills below malachite-green; tail-feathers green, the lateral ones with the outer webs blue, and the inner webs red towards the base: bill coral-red; feet grey; iris brown. Total length 11.5 inches, wing 8·1, tail 3·4, bill 0·95, tarsus 0·6.

Young. Like the adult, a few reddish feathers on the forehead; the blue band across the lower throat brighter; the bill in the

dried skin orange.

Hab. Ecuador and Colombia.

a. Ad. sk. b. Ad. sk. c. ♂ ad. sk. d. Ad. sk. e. Ad. sk. f. Ad. sk. a. Ad. sk.	Colombia.  New Granada. Bababoyo, Ecuador (Fraser). Sarayacu, Ecuador (Buckley). Sarayacu, Ecuador (Buckley). Monii, Ecuador (Buckley).	Gould Coll. Massena Coll. Purchased. Sclater Coll. Sclater Coll. Salvin-Godman Coll. Salvin-Godman Coll.
g. Ad. sk.	Monji, Ecuador (Buckley).	Salvin-Godman Coll.
h. Ad. sk.	Ecuador (Higgins).	Salvin-Godman Coll.

#### 4. Pionus maximiliani.

Siy, Azara, Apunt. Hist. Nat. Parag. i. p. 461, n. 287 (1803); id. Voy. (ed. Sonn.) iv. p. 77 (1809).

Psittacus menstruus, part., Vieill. N. D. xxv. p. 331 (1817).

Psittacus maximiliani, Kuhl, Consp. Psitt. p. 72 (1820) (juv.); Steph. Gen. Zool. xiv. p. 103 (1826); Desm. Dict. Sc. Nat. xxxix. p. 97 (1826); Hahn, Orn. Atl., Papag. p. 82, t. 62 (1836); G. R. Gr. Gen. B. ii. p. 421, n. 10 (1846); Hartl. Ind. Azara Apunt. p. 18 (1847); ? Schomb. Guian. iii. p. 723 (1848); G. R. Gr. List Psitt. Brit. Mus. p. 75 (syn. emend.) (1859).

Psittacus cyanurus, Princ. Maximil. (nec Shaw), fide Kuhl, l. c. Psittacus flavirostris, Spix, Av. Bras. i. p. 42, t. 31. f. 2 (1824); Wied, Beitr. iv. p. 243 (1832).

Pionus maximiliani, Wayl. Mon. Psitt. p. 603 (1832); Bp. Rev. et Mag. de Zool. 1854, pp. 148, 152, n. 117; Souancé, Rev. et Mag. de Zool. 1856, p. 155; Bp. Naumannia, 1856, Consp. Psitt. n. 116; Souancé, Icon. Perr. pl. xxxiv. f. 2 (1857); Sclat. Cat. Am. B. p. 354, n. 2118 (1862); Sousa, Mus. Nac. Lisb. Psittaci, p. 12 (1869); G. R. Gr. Hand-list, ii. p. 162, n. 8302 (1870); Sclat. & Salv. Nomencl. Av. Neotrop. p. 114, n. 2 (1873); Cab. Journ. f. Orn. 1874, p. 228; Berl. Journ. f. Orn. 1874, p. 283; Sclat. Rowl. Orn. Misc. iii. pp. 6, 7 (1877); Sclat. & Salv. P. Z. S. 1879, p. 635; White, P. Z. S. 1882, p. 622 (Argentina); Salv. Cat. B. (Strick), Coll. p. 468 (1882); Sclat. List. Uset. An. 84h. ol. Strickl. Coll. p. 468 (1882); Sclat. List Vert. An. 8th ed. p. 352 (1883); Berl. u. Jhering, Zeitschr. d. ges. Orn. 1885, p. 165; Sclat. Argent. Orn. ii. p. 217 (1886); Berl. Journ. f. Orn. 1887, p. 122.

Psittacus flavirostris vel maximiliani, Bourj. Perr. pl. 54 (1837-38). Psittacus senilis, Brehm (nec Spix), Mon. d. Papag. t. 44 (nec descr.)

Pionus siy, Souancé, Rev. et Mag. de Zool. 1856, p. 155; Bp. Naumannia, 1856, Consp. Psitt. n. 117; Sovancé, İcon. Perr. pl. xxxiv. f. 1 (1857); G. R. Gr. Hand-list, ii. p. 162, n. 8303 (1870).

Pionus flavirostris, Burm. Syst. Ueb. ii. p. 191 (1856).

Psittacus siy, G. R. Gr. List Psitt. Brit. Mus. p. 75, specim. a, b, c

Pionus corallinus, Cass. (nec Bp.) in Page's Narr. of the U.S. La Plata Exped. p. 601 (1859).

Amazona maximiliani, Schleg. Mus. P.-B. Psittaci, p. 61 (1864); id. op. cit. Revue, p. 29 (1874).

Pionias menstruus, part., Finsch, Papag. ii. p. 441 (1868); Gieb. Thes. Orn. iii. p. 191 (1872).

Pionias maximiliani, part., Finsch, Papag. ii. p. 448 (1868); Pelz. Orn. Bras. pp. 264, 447, liii (1871); Gieb. Thes. Orn. iii. p. 191 (1874); Rchnw. Vogelbild. t. x. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 362 (Consp. Psitt. p. 202).

Pionias flavirostris, Rehnw. Vogelbild. t. xxvi. f. 5 (1878-83); id. Journ. f. Orn. 1881, p. 363 (Consp. Psitt. p. 203), 1882, p. 11.

Adult. Green; head green, each feather with a narrow dark grey edge; forehead and lores nearly black; cheeks green, each feather with bluish-grey edges; chin and a band across the lower throat, produced by the edges of the feathers, dull purple-blue; the feathers of the hind neek with whitish shaft-streaks, only visible on raising the feathers; feathers of the back, rump, breast, and abdomen and wing-coverts with dusky edges, and in some lights olive-brown; under tail-coverts red, sometimes tinged with purple, the longest with narrow yellowish-green edges; first primary with the outer web edged with greenish blue; great under wing-coverts and inner webs of the quills below grass-green; tail above green, the lateral feathers with the outer webs mostly blue, and the inner webs more or less red; tail below green, with the base of the inner webs of the lateral feathers more or less red: bill horn-yellowish, with the base of the upper mandible horn-dusky; feet dusky. Total length about 11 inches, wing 7.1 to 6.7, tail 3.2, bill 1.1, tarsus 0.6.

Foung. Much greener than the adult on the head; forehead reddish; the blue cross band on the lower throat less developed.

Hab. South-eastern Brazil and Paraguay.

The existence of this species in British Guiana appears to me very doubtful, and most likely the birds attributed to it by Schomburgk were young, with reddish forehead, of *P. menstruus*. The type of *P. maximiliani* with a reddish frontal band is no doubt a young specimen of the bird called *P. flavirostris* by Spix.

•	0 1	V	• •
a. Ad	. st.	S. America.	Purchased.
b. Ad	. st.	Brazil.	Purchased.
c. Ad.	sk,	[Chili.]	Riocour Coll.
d.e. A	d. et imm. sk.	Brazil.	Sclater Coll.
f. Ad.	sk.		Zoological Soc. Coll.
g. Juy		Brazil.	Baron Laugier's Coll.
	Ad. sk.	Bahia, Brazil (Wucherer).	Salvin-Godman Coll.
	ad. sk.	Ypanema, Brazil, July	Salvin-Godman Coll.*
		(Natterer).	

## 5. Pionus bridgesi.

Pionus bridgesii, Boucard, Humming-Bird, i. p. 27 (April 1891).

Very much like *P. maximiliani*, from which it differs, 1st. in having the feathers of the pileum from the forehead green, with dark edges, so that only the lores are black; 2nd, the chin and a band across the throat of a red vinous colour, instead of blue; 3rd, the green colour of the upper and under parts more olive-brown. (*Mus. Berlepsch.*)

Hab. Bolivia.

#### \* Pionus Lacerus.

Pionias lacerus, Heine, Journ. f. Orn. 1884, p. 265 (Tucuman); Heine & Rehnw. Nomenel. Mns. Hein. Orn. p. 232 (1890).
Pionus lacerus, Berl. Journ. f. Orn. 1887, p. 122 (note).

Like P. flavirostris (Spix) (=maximiliani), but larger and stronger; upper parts brighter green; feathers of the pileum green, edged with bluish; interscapular region, back, and wing-coverts green; under surface olive-green; teathers of the throat and breast with narrow blue edges; under tail-coverts red, greenish along the middle: under mandible brown, with the tip yellowish; upper mandible yellowish, dusky at the base. Total length 13-56 inches, wing 8-25, tail 4-32, bill 1-37.

Hab. Tucuman, Argentine Republic.

Obs. This species differs from P. flavirostris (Spix) in the following particulars:—1. The feathers of the back and the wing-coverts are of a brighter green. 2. The feathers of the pileum are bright green, scarcely edged with blue. 3. The feathers of the throat have no reddish-like colour at all. 4. The blue edges of the feathers of the chest are very narrow, and not so wide as in P. flavirostris. 5. The under tail coverts are green in the middle, and not the least tinged with blue. (Heine.)

I have not been able to make out this species, not having seen specimens from Tucuman.

This species is not mentioned in Selater's 'Argentine Ornithology.'

#### 6. Pionus tumultuosus.

Psittaeus tumultucsus, Tsch. Wiegm. Arch. 1844, i. p. 304; id. Faun. Per. p. 270 (1844); G. R. Gr. Gen. B. ii. p. 421, n. 30 (1846).

Chrysotis tumultuosa, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 107; id. Naumannia, 1856, Consp. Psitt. n. 102; G. R. Gray, List Psitt. Brit. Mus. p. 82 (1859); id. Hand-list, ii. p. 165, n. 8341 (1870). Pionias tumultuosus, Finsch, Papag. ii. p. 457 (1868); Gieb. Thes. Orn. iii. p. 193 (1877); Rehnw. Vogelbild. t. xxvi. f. 2 (1878–83); id. Journ. f. Orn. 1881, p. 363 (Consp. Psitt. p. 203).

Pionus tumultuosus, Scl. & Salv. Nomencl. Av. Neotrop. p. 114, n. 6 (1873); Tacz. P. Z. S. 1874, p. 550; Sclat. Rowl. Orn. Misc. iii. pp. 6, 7, 8, pl. lxxxi. (1877); Sclat. & Salv. P. Z. S. 1879, p. 635; Tacz. Orn. Pér. iii. p. 219, Tabl. p. 100 (1886).

Adult male. Green; pileum, cheeks, and chin vinous red, with the bases of the feathers white; feathers of the cheeks and carcoverts edged with dark purple; hind neck, sides of the neck, and breast purple vinous; under tail-coverts red, with a purple tinge and edged with yellowish green; greater under wing-coverts and inner webs of the quills below malachite-green; tail above green, with the base of the lateral feathers red on the inner webs, purple on the outer ones; tail below green, with the base red: bill yellow; feet bluish grey; iris brown. Total length about 11 inches, wing 7, tail 3.4, bill 0.95, tarsus 0.6.

Female. Like the male (Taczanowski).

Hab. Peru and Bolivia.

Tilotilo, Bolivia (Buckley). Sclater Coll. a. Ad. sk. Salvin-Godman Coll. b, c. Ad. sk. Tilotilo, Bolivia (Buckley).

#### 7. Pionus seniloides.

? Chrysotis albifrons, Bp. (nec Sparrm.) Atti Sc. Ital. vi. p. 403 (1845).

Psittacus selinoides (sie), Mass. et Souancé, Rev. et Mag. de Zool.

1854, p. 73.

Psittacus seniloides, Bp. Rev. et Mag. de Zool. 1854, p. 147; G. R. Gr.

List Psitt. Brit. Mus. p. 76 (1859).

 Pionus seniloides, *Bp. Rev. et May. de Zool.* 1854, pp. 149, 152,
 n. 121; Sclat. P. Z. S. 1855, p. 162; Souancé, Rev. et May. de Zool. 1856, p. 155; Bp. Naumannia, 1856, Consp. Psitt. n. 120; Souancé, Icon. Perr. pl. xxxvi. (1857); Sclat. Cat. Am. B. p. 355, n. 2120 (1862); G. R. Gr. Hand-list, ii. p. 162, n. 8305 (1870); Sclat. & Salv. Nomencl. Av. Neotrop. p. 114, n. 5 (1873); Sclat. & Salv. P. Z. S. 1875, p. 235; Sclat. Rowl. Orn. Misc. iii. pp. 6, 7 (1877); Berl. & Tacz. P. Z. S. 1884, p. 309; Tacz. & Berl. P. Z. S. 1885, pp. 109, 123.

Pionias gerontodes, Finsch, Papag. ii. p. 454 (1868); Gieb. Thes. Orn. iii. p. 190 (1877); Rehnw. Vogelbild. t. xxvi. f. 7 (1878-83);

id. Journ. f. Orn. 1881, p. 364 (Consp. Psitt. p. 204).

Amazona gerontodes, Schley. Mus. P.-B. Psittaci, Revue, p. 29 (1874).

Adult male. Green; pileum or sinciput white, with the edges of the feathers orange-red; feathers of the occiput, nape, and sides of the neck white at the base, then greyish blue, and edged with black; feathers of the cheeks white, edged with black, sometimes the anterior feathers edged with orange-red; a blue band on the throat, passing into vinous on the breast and middle of the abdomen; under tail-coverts red, with dark shafts; greater under wing-coverts and inner webs of the quills below malachite-green; central tail-feathers green, the lateral ones green at the apical third, dull purple on the outer webs, and red on the basal two thirds of the inner ones; tail underneath red at the base, green towards the tip: bill horn-yellow; feet dusky grey. Total length about 11 inches, wing 7·3, tail 3, bill 1·05, tarsus 0·6.

Female. Like the male.

Young. Differs from the adult in having the feathers of the head green with white bases, those of the pileum with narrow reddish edges, the feathers of the sides of the head white with green edges, and those of the throat and breast vinous, edged with green.

Hab. Colombia and Equador.

Specimens from Venezuela and Ecuador seem to differ from those from Colombia in never having the feathers of the sinciput or pileum white with red edges; such feathers occur only on the forehead, the rest of the feathers of the pileum being white, dark greyish towards the tips and edged with black.

a. Ad. sk.	New Granada.	Purchased.
b. Ad. sk.	Colombia.	Massena Coll.
	(Probably one of the	types of the species.)
c. Ad. sk.	Bogota (Trübner).	Sclater Coll.
$d, e. \ \ 2 \ ad. \ et \ \ \beta$	Merida, Venezuela (Goering).	Salvin-Godman Coll.
imm. sk., var.		
f. Ad. sk., var.	Sarayacu, Ecuador (C. Buckiey).	Salvin-Godman Coll.
y. Ad. sk., var.	Ecuador.	Sclater Coll.
h, i. Ad. sk., var.	San Lucas, Ecuador (C. Buckley).	Salvin-Godman Coll.

#### 8. Pionus senilis.

Psittacus senilis, Spix, Av. Bras. i. p. 42, t. xxxi. f. 1 (1824) \*; Hahn, Orn. Att., Papag. p. 79, t. 59 (1836); Bourj. Perr. pl. 60 (1837-38); G. R. Gr. Gen. B. ii. p. 421, n. 11 (1846); id. List Psitt. Brit. Mus. p. 75 (1859).

Psittacus leucorhynchus, Sw. Philos. Mag. 1827, p. 438.

Pionus senilis, Wagl. Mon. Isitt. p. 604 (1832); Bp. Rev. et Mag. de Zool. 1854, pp. 148, 152, n. 120; Souancé, Rev. et Mag. de Zool. 1856, p. 155; Bp. Naumannia, 1856, Consp. Psitt. n. 119; Sclat. P. Z. S. 1856, p. 306, 1857, p. 230; Sclat. & Salv. Ibis, 1859, p. 138; Sclat. Cat. Am. B. p. 355, n. 2121 (1862); Cab. Journ. f. Orn. 1862, p. 335; Sousa, Mus. Nac. Lisb. Psittaci, p. 12 (1869); Frantz. Journ. f. Orn. 1869, p. 366; Sclat. & Salv. P. Z. S. 1870, p. 837; G. R. Gr. Hand-list, ii. p. 162, n. 8304 (1870); Salv. Ibis, 1871, pp. 87, 95; Sclat. & Salv. Nomencl. Av. Neotrop. p. 114, n. 7 (1873); Sclat. Rowl. Orn. Misc. ii. pp. 6, 7 (1877); Boucard, P. Z. S. 1878, pp. 38, 46; Sclat. List Vert. An. 8th ed. p. 352 (1883); Zeled. Pr. U.S. Nat. Mus. viii. p. 111 (1885).

<sup>\*</sup> Although Spix includes *P. scnilis* in his work, he does not mention having found it in Brazil.

Amazona senilis, Schleg. Mus. P.-B. Psittaci, p. 62 (1864); id. op. cit. Revue, p. 29 (1874).

Pionius senilis, Lawr. Ann. Lyc. N. Y. viii. p. 184 (1865), ix. p. 131

(1868).

Pionias senilis, Finsch, Papag. ii. p. 460 (1868); Pelz. Orn. Bras.
p. 264 (note) (1871); Gieb. Thes. Orn. iii. p. 193 (1877); Rehnw.
Vogelbild. t. x. f. 6 (1878-83); id. Journ. f. Orn. 1879, p. 212, 1881, p. 364 (Consp. Psitt. p. 204).

Adult male. Olive-green; pileum white; feathers of the rest of the head green, with blue edges; a white patch on the chin and middle of the throat; feathers of the breast olive-brown, with purple-blue edges, gradually becoming greener towards the abdomen; under tail-coverts rose-red, with green shafts and bluish tinge towards the tips, the longer ones edged with yellow-green; smaller and median upper wing-coverts olive-brown with golden reflexions; carpal edge white: bastard-wing, primary-coverts, and primaries deep blue, the last, towards the tips, green; secondaries blue, edged with green on the outer webs; under wing-coverts green, washed with blue towards the tips, the greater ones and the inner webs of the quills below grass-green; central tail-feathers green, blue towards the tips; the lateral feathers blue, with the base of the inner webs red, the inner ones green towards the bases of the outer webs; tail below bluish green towards the tips, red towards the base: bill pale horn-yellow; feet pale brown; iris brown. Total length about 9.5 inches, wing 7.2, tail 2.9, bill 1.05, tarsus 0.6.

Female. Like the male.

Young. Head, neck, and breast green, with no blue edges to the feathers; forehead white; no white patch on the chin.

Hab. Southern Mexico and Central America as far as Costa Rica.

Many specimens show light brown tips on the upper wing-coverts.

in the state of th	0	11
$a-d$ . $\delta$ ad. sk.	Cuesta de Mizantla, Mexico, June.	Salvin-Godman Coll.
e. $Q$ ad. sk.	Villa Alta, Oaxaca, Mexico, March (M. Trujillo).	Salvin-Godman Coll.
f. Ad. sk.	Mirador, near Vera Cruz, Mexico (Dr. C. Sartorius).	Salvin-Godman Coll.
q. Ad. sk.	Guatemala.	Tweeddale Coll.
h. Ad. sk.	Guatemala.	Gould Coll.
i. Ad. sk.	Guatemala.	O. Salvin, Esq. [P.].
k. ♂♀ad. sk.	Choctum, Vera Paz (O. Salvin).	Salvin-Godman Coll.
l. Ad. sk.	Chisec, Vera Paz (O. Salvin).	Salvin-Godman Coll.
m, n. Ad. et	Coban, Vera Paz (O. Salvin).	Salvin-Godman Coll.
imm. sk.	Cohon Vone Por Fohmony	Tweeddale Coll.
o. Ad. sk.	Coban, Vera Paz, February (O. Salvin).	I weeddate Con.
<i>p</i> . Ad. sk.	Orange Walk, British Honduras, Dec. (Gaumer).	Salvin-Godman Coll.
q. Ad. sk.	Vicinity of Belize, British Honduras (Blancaneaux).	Salvin-Godman Coll.
r. Juv. sk.	Honduras (H. Whitely).	Sclater Coll.
s. of ad. sk.	Angostura, Costa Rica, February (J. Carmiol).	Salvin-Godman Coll.

t. ♀ ad. sk. Costa Rica (J. Carmiol). Sclater Coll. u. Imm. sk. San José, Costa Rica, May Salvin-Godman Coll. (M. L. Calleja). Costa Rica. v. Juv. sk. Purchased. w. Ad. sk. Costa Rica. Purchased. x. Ad. sk. [Brazil.] Purchased. y. Juv. st. [Brazil.] Purchased.

## 9. Pionus chalcopterus.

Psittacus chalcopterus, Fras. P. Z. S. 1840, p. 59; Bp. Atti Sc. Ital. vi. p. 403 (1845); G. R. Gr. Gen. B. ii. p. 421, n. 13 (1846); Fras. Zool. Typ. pl. 56 (1849); G. R. Gr. List Psitt. Brit. Mus. p. 76 (1859).

Pionus chalcopterus, Hartl. Syst. Verz. Ges. Mus. p. 87 (1844); Bp. Rev. et Mag. de Zool. 1854, pp. 148, 155, n. 119; Sclat. P. Z. S. 1855, p. 162; Souancé, Rev. et Mag. de Zool. 1856, p. 155; Bp. Naumannia, 1856, Consp. Psitt. n. 118; Souancé, Icon. Perr. pl. xxxv. (1857); Sclat. P. Z. S. 1859, p. 147; id. Cat. Am. B. p. 355, n. 2123 (1862); Sousa, Mus. Nac. Lisb. Psittaci, p. 12 (1869); G. R. Gr. Hand-list, ii. p. 163, n. 8307 (1870); Wyatt, Ibis, 1871, p. 381; Sclat. § Salv. Nomencl. Av. Neotrop. p. 114, n. 8 (1873); Sclat. Rowl. Orn. Misc. iii. pp. 6, 7 (1877); Sclat. § Salv. P. Z. S. 1879, p. 538; Salv. Cat. B. Strickl. Coll. p. 468 (1882); Berl. § Tacz. P. Z. S. 1883, p. 573; Berl. Journ. f. Orn. 1884, p. 319.

Psittacus hæmorrhous, Licht. Nomencl. Av. p. 70 (1854).

Amazona chalcoptera, Schleg. Mus. P.-B. Psittaci, p. 62 (1864);

id. op. cit. Revue, p. 29 (1874).

Pionia's chalcopterus, Finsch, Papag. ii. p. 462 (1868); Gieb. Thes. Orn. iii. p. 189 (1877); Rehuw. Vogelbild. t. xxvi. f. 6 (young?) (1878–83); id. Journ. f. Orn. 1881, p. 364 (Consp. Psitt. p. 204).

Adult male. Blackish blue; head and neck dark green, with the edges of the feathers dark blue, producing a scale-like appearance; feathers of the back and scapulars dark green, brownish in the middle and indistinctly edged with blue; lower back and rump deep blue; upper tail-coverts brown-green, with blue edges; underparts blue, each feather being dark green with blue edges; feathers of the chin with whitish edges, those of the throat with pale red edges; under tail-coverts vermilion, more or less blue along the shafts: upper wing-coverts coppery brown; bastard-wing, primary-coverts. and quills purple-blue; inner secondaries with brown edges; the outermost greater upper wing-coverts blue, edged with brown; smaller and median under wing-coverts blue, the greater ones and the inner part of the inner webs of the quills verditer-blue; tail blue, below towards the base of the inner webs of the feathers verditer-blue, sometimes reddish: bill horn-yellowish white; feet and naked skin round the eyes reddish flesh-colour; iris brown. Total length about 11 inches, wing 7.4, tail 3.2, bill 1.1, tarsus 0.65.

Young. Has the head, back, scapulars, and upper tail-coverts greenish; the underparts brown, with the feathers edged with dark green, some with blue; upper wing-coverts brown, with lighter

tips, edged with green. The young bird is altogether green, while the adult is blue.

Hab. Colombia and E. Ecuador.

$a, b, \beta$ ad. sk.	Colombia.	Zool. Soc. Coll.
c. Ad. sk.	Bogota.	Purchased.
d. Ad. sk.	Bogota.	J.W. Baker, Esq. [P.].
e. Ad. sk.	Bogota.	Sclater Coll.
f. Ad. sk.	Vicinity of Bogota, New Gran- ada (W. Nelson).	Salvin-Godman Coll.
$g$ . $\mathcal{J}$ imm. sk.	Envigado, Antioquia, Colombia (T. K. Salmon).	Salvin-Godman Coll.
h. Ad. sk.	Balzar Mountains, Ecuador (Illingworth).	Salvin-Godman Coll.
i. Imm. sk.	Sarayacu, Ecuador (C. Buckley).	Salvin-Godman Coll.

### 10. Pionus fuscus.

The Little Dusky Parrot, Edw. Glean. vii. pl. 315 (1764); Lath. Syn. i. p. 302 (1781); *id. Gen. Hist.* ii. p. 222 (with var. A) (1822). Perroquet varié de Cayenne, *D'Aubent. Pl. Enl.* 408.

Psittacus fuscus, Müll. S. N. Suppl. p. 78 (1776); Cass. Pr. Ac. Philad. 1864, p. 240.

Papegai violet, Buff. Hist. Nat. Ois. vi. p. 244 (1779).

Psittacus violaceus, Bodd. Tabl. des Pl. Enl. p. 25 (1783); G. R. Gr. Gen. B. ii. p. 421, n. 12 (1846); id. List Psitt. Brit. Mus. p. 76 (1859); Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xvi (1863).

Psittacus purpureus, Gm. S. N. i. p. 346, n. 124 (1788); Lath. Ind. Orn. i. p. 129, n. 140 (1790); Shaw, Gen. Zool. viii. 2, p. 540 (1811); Bechst. Kurze Ueb. p. 104 (1811-12); Vicill. N. D. xxv. p. 332 (1817); Kuhl, Consp. Psitt. p. 73 (1820); Vicill. Enc. Méth. iii. p. 1377 (1823); Spix, Av. Bras. i. p. 46 (1824); Steph. Gen. Zool. xiv. p. 104 (1826); Voigt, Cuv. Uebers. p. 740 (1831); Less. Tr. d'Orn. p. 198 (femelle) (1831).

Psittacus infuscatus, Shaw, Nat. Mise. pl. 789 (1789-1813).

Le Perroquet à camail bleu (femelle), Levaill. Perr. pl. 115 (1805). Psittacus menstruus, jun., Licht. Verz. Doubl. p. 6 (1823); Brehm,

Mon. d. Papag. t. 61 (1854).

Pionus purpureus, Wagl. Mon. Psitt. p. 606 (1832); Hartl. Syst. Terz. Ges. Mus. p. 87 (1844); Bp. Consp. Ar. i. p. 5 (1850); id.
 Rev. et Mag. de Zool. 1854, pp. 148, 152, n. 116; Souancé, Rev. et May. de Zool. 1856, p. 155; Bp. Naumannia, 1856, Consp. Psitt. n. 114; Burm. Syst. Ueb. ii. p. 192 (1856); Sousa, Mus. Nac. Lisb. Psittaci, p. 12 (1869).

Pionus violaceus, Sclat. Cat. Am. B. p. 355, n. 2122 (1862); Sclat. & Salv. P. Z. S. 1867, p. 588; iid. Nomencl. Av. Neotrop. p. 114, n. 9 (1873); Sclat. Rowl. Orn. Misc. iii. pp. 6, 7 (1877); Forbes, P. Z. S. 1877, p. 307; Salv. Cat. B. Strickl. Coll. p. 468 (1882); Sclat. List Vert. An. 8th ed. p. 352 (1883); Salv. Ibis,

1886, p. 501.

Amazona violacea, Schleg. Mus. P.-B. Psittaci, p. 63 (1864); id.

op. cit. Revue, p. 29 (1874).

Pionias violaceus, Finsch, Papag. ii. p. 463 (1868); Pelz. Orn. Bras. pp. 264, 448, liii (1871); Gieb. Thes. Orn. iii. p. 193 (1877); Rehnw. Vogelbild. t. xxvi. f. 3 (1878-83); id. Journ. f. Orn. 1881, p. 365 (Consp. Psitt. p. 205).

Pionus fuscus, G. R. Gr. Hand-list, ii. p. 162, n. 8306 (1870).

Adult male. Back, rump, upper tail-coverts, scapulars, and wing-coverts dark brown, the edges of the feathers lighter or earthy brown; head dark blue, lores tinged with red; ear-coverts black; on the throat and sides of the neck a kind of whitish collar, produced by the whitish edges of the feathers; chin-feathers edged with reddish; underparts brown, with a purple-red wash on the edges of the feathers; under tail-coverts purple-red; bastard-wing, primary-coverts, quills, and smaller and median under wing-coverts purple-blue; quills below black, with the inner part of the inner webs bright purple-blue, like the greater under wing-coverts; tail purple-blue, with the inner webs of the lateral feathers, except at the tip, red: bill greyish black, towards the base of the upper mandible yellowish; feet grey-black; iris brown-black. Total length 10.5 inches, wing 6.5, tail 2.7, bill 1, tarsus 0.6.

Female. Like the male.

Young. Some of the upper wing-coverts are edged with green, also the secondaries have a greenish tinge.

Hab. Guiana and Lower Amazons as far up as Rio Negro and Borba.

There is a good deal of individual variation in this species, some specimens being much darker above than others, or having the underparts of a much brighter purple-red tinge.

a. Ad. st.		Purchased.
b, c, d. Ad. sk.	S. America.	Purchased.
e. Ad. sk.	S. America.	J. Gould, Esq. [P.].
f. Ad. sk.	S. America.	Sclater Coll.
g. Ad. sk.	British Guiana (Schomburgk).	Geograph. Soc. [P.]. Salvin-Godman Coll.
h. Ad. sk.	British Guiana.	Salvin-Godman Coll.
$i, k. \beta \supseteq ad. sk.$	Bartica Grove, British Guiana,	Salvin-Godman Coll.
	September (H. Whitely).	
$l, m. \subsetneq \text{imm. sk.}$	Bartica Grove, Aug., Sept.	H. Whitely [C.].
$n$ . $\mathcal{J}$ ad. sk.	River Carimang, Brit. Guiana,	Salvin-Godman Coll.
	September (H. Whitely).	
o. Ad. sk.	Para (Wallace).	Sclater Coll.
p, q. Skeletons.		Zool. Soc. Coll.

### 20. DEROPTYUS.

Deroptyus, *Wagl. Mon. Psitt.* p. 492 (1832)..... D. accipitrinus. Derotypus, *Bp. Consp. Av.* i. p. 5 (1850) . . . . . D. accipitrinus.

Range. Guiana, Amazon Valley, and N.E. Brazil.

# 1. Deroptyus accipitrinus.

Psittacus elegans, Clus. exot. Auctuar. p. 365.
Psittacus elegans Clusii, Ray, Syn. Av. p. 32, n. 11 (1713).
The Hawk-headed Parrot, Edw. Birds, iv. pl. 165 (1751); Lath. Syn. i. p. 266, n. 74 (with var. A, p. 267) (1781); id. Gen. Hist. ii. pp. 215, 216 (with vars. A, B) (1822).
Psittacus varius Indicus, Briss. Orn. iv. p. 300 (1760).

Psittacus Aquarum Lupiarum Insulæ, Briss. Orn. iv. p. 302 (1760). Psittacus coronatus, Linn. S. N. i. p. 143, n. 21 (1766) (descr. falsa); 1 Stratage Geoffich, R. S. W. I. p. 145, H. 21 (1760) (descr. lates).
1 Gm. S. N. i. p. 330, n. 21 (1788); Lath. Ind. Orn. i. p. 106, n. 74 (1790); Shaw, Gen. Zool. viii. 2, p. 481 (1811); Bechst. Kurze Ueb. p. 88 (1811-12); Vieill. N. D. xvii. p. 11 (1817).
Psittacus accipitrinus, Linn. S. N. i. p. 148, n. 38 (1766); Gm. S. N.

i. p. 345, n. 38 (with var.  $\beta$ ) (1788); Lath. Ind. Orn. p. 111, n. 89 (1790); Bechst. Kurze Ueb. p. 90 (1811-12); Vieill. N. D. xxv. p. 317 (1817); Kuhl, Consp. Psitt. p. 82 (1820); Vieill. Enc. Méth. iii. p. 1368 (1823); Spix, Av. Bras. i. p. 44, t. xxxii a. (1824); Steph. Gen. Zool. xiv. p. 106 (1826); Voigt, Cur. Uebers. p. 743 (1831); Less. Tr. d'Orn. p. 198 (1831); Hahn, Orn. Atl., Papag. p. 73, t. 54 (1836); Bourj. Perr. pl. 62 (1837–38); G. R. Gr. Gen. B. ii. p. 421, n. 32 (1846); id. List Psitt. Brit. Mus. p. 77 (1859); Schleg. Dierent. p. 66 (1864).

Perroquet maillé de Cayenne, D'Aubent. Pl. Enl. 526. Perroquet varié, Buff. Hist. Nat. Ois. vi. p. 117 (1779). Papegai maillé, Buff. Hist. Nat. Ois. vi. p. 239 (1779).

Crowned Cackatoo, Lath. Syn. i. p. 259 (1781); id. Gen. Hist. ii. p. 198 (1822).

Ruff-necked Parrot, Lath. Syn. i. p. 268 (1781); id. Gen. Hist. ii. p. 217 (1822).

Psittacus violaceus, Gm. (nec Boild.) S. N. i. p. 337, n. 106 (1788); Lath. Ind. Orn. i. p. 112, n. 91 (1790); Bechst. Kurze Ueb. p. 91 (1811-12); Vieill. N. D. xxv. p. 328 (1877); Kuhl, Consp. Psitt. p. 96 (1828); Vieill. Enc. Méth. iii. p. 1374 (1823).

Psittacus Clusii, Shaw, Gen. Zool. viii. 2, p. 482 (1811). Cacatua coronatus, Vieill. Enc. Méth. iii. p. 1414 (1823).

Deroptyus accipitrinus, Wagl. Mon. Psitt. p. 541 (1832); Cab. in Schomb. Guiana, iii. p. 726 (1848); ? Schatt. & Salv. P. Z. S. 1867, p. 588; G. R. Gr. Hand-list, ii. p. 163, n. 8309 (1870); Sund. Meth. nat. Av. disp. Tent. p. 69 (1872); Schat. & Salv. Nomencl. Av. Nvotrop. p. 114 (1873); Rehnw. Vogelbild. t. x. f. 5 (1878-83); id. Journ. f. Orn. 1881, p. 380 (Consp. Psitt. p. 220); Sclat. List Vert. An. 8th ed. p. 351 (1883); Salv. Ibis, 1886, p. 69.

Derotypus accipitrinus, Bp. Consn. Av. i. p. 5 (1850); id. Rev. et Mag. de Zool. 1854, p. 151, n. 80; Sonancé, Rev. et Mag. de Zool. 1856, p. 153; Bp. Naumannia, 1856, Consp. Psitt. n. 106; Sousa, Mus. Nac. Lisb. Psittaci, p. 10 (1869).

Deroptius coronatus, Burm. Syst. Ueb. ii. p. 179 (1856).

Amazona accipitrina, Schleg. Mus. P.-B. Psittaci, p. 67 (1864); id. op. cit. Revue, p. 30 (1874). Pionias accipitrinus, Finsch, Papag. ii. p. 466 (1868); Pelz. Orn.

Bras. pp. 265, 448, liii (1871); Cab. Journ. f. Orn. 1872, p. 75; Gieb. Thes. Orn. iii. p. 189 (1877).

Adult male. Green; head brown, frontal edge and lores darker; pilenm hoary grey, sides of the head with hoary shaft-streaks; long feathers of the nape and feathers of the breast and abdomen dark red, with the edges blue; bastard-wing, primary-coverts, and primaries black; secondaries green, with the tips black, slightly tinged with blue; tail-feathers green, tinged with blue towards the tip, the blue increasing towards the outer feather, which has the outer web blue, except at the base; greater under wing-coverts, quills, and tail-feathers below black; the lateral tail-feathers have dull red spots at the bases of the inner webs: bill dusky horn-colour; feet

black; iris brown. Total length 14 inches, wing 8, tail 6.4, bill 1.35, tarsus 0.7.

Female. Like the male, but apparently with no red spots at the bases of the inner webs of the lateral tail-feathers.

Hab. Guiana, Amazons Valley from Para (?) to Ecuador, and Maranham (N.E. Brazil).

Specimens from Ecuador and Maranham, mentioned below, are larger and have the pileum not hoary grey, but brown with hoary streaks, and the lateral tail-feathers without dull red spots at the bases of the inner webs; they probably belong to a distinct form

a. Ad. st.	Demerara.	Parchased.
b. Ad. st.	British Guiana (Schomburgk).	Geograph. Soc. [P.].
c. ♂ ad. sk.	Merumé Mountains, British	Geograph. Soc. [P.]. Salvin-Godman Coll.
J 0 a J ala	Guiana, July (H. Whitely).	Colore Colores Coll
$d. \ \ $ ad. sk.	Camacusa, British Guiana, March (II. Whitely).	Salvin-Godman Coll.
e. Ad. sk.	Cayenne.	Sclater Coll.
f. Ad. sk.	•	Riocour Coll.
g. Ad. sk., var.	Maranham (R. Wendeborn).	Salvin-Godman Coll.
h. Ad. sk., var.	Sarayacu, Ecuador (C. Buckley).	Salvin-Godman Coll.

#### 21. TRICLARIA.

Type.

Triclaria, Wagl. Mon. Psitt. p. 499 (1832) . . . . . T. cyanogaster. Maximilicus, "Less." (errore), G. R. Gr. List Gen. B. p. 51 (1840).

Range. South-eastern Brazil.

# 1. Triclaria cyanogaster.

Psittacus cyanogaster, Vieill. N. D. xxv. p. 328 (1817); Wied, Reise Bras. i. p. 263 (1820); Kuhl, Consp. Psitt. p. 71 (1820); Vieill. Enc. Méth. iii. p. 1375 (1823); Steph. Gen. Zool. xiv. p. 102 (1826); Less. Man. d'Orn. ii. p. 152 (1825); id. Tr. d'Orn. p. 200 (1831); Wied, Beitr. iv. p. 212 (1832); Hahn, Orn. Atl., Papag. p. 33, t. 18 (1834); Bourj. Perr. pl. 57 (1837–38).

Azure-bellied Parrot, Lath. Gen. Hist. ii. p. 197 (1822).

Psittacus malachitaceus, Spix, Av. Bras. i. p. 40, t. xxviii. (young male) (1824); Brehm, Mon. d. Papag. t. 39.

Triclaria cyanogastra, Wagl. Mon. Psitt. p. 632 (1832); Hurtl. Syst. Verz. Ges. Mus. p. 87 (1844): Bp. Consp. Av. i. p. 5 (1850); id. Rev. et Mag. de Zool. 1854, p. 152, n. 124; Souancé, Rev. et Mag. de Zool. 1856; Bp. Naumannia, 1856, Consp. Psitt. n. 123; Burm. Syst. Ueb. ii. p. 181 (1856); Sclat. Cat. Am. B. p. 354, n. 2116 (1862); Sousa, Mus. Nac. Lisb. Psittaci, p. 13 (1869); G. R. Gr. Hand-list, ii. p. 166, n. 8348 (1870); Hamilt. Ibis, 1871, p. 309; Sund. Meth. nat. Av. disp. Tent. p. 70 (1872); Salv. & Sclat. Nomencl. Av. Neotrop. p. 114 (1873); Berl. Journ. f. Orn. 1824, p. 283; Salv. Cat. B. Strickl. Coll. p. 467 (1882); Berl. u. Jhering, Zeitschr. f. ges. Orn. 1855, p. 164; Allen, Bull. Am. Mus. Nat. Hist. ii. p. 264 (1889).

Erythrostomus cyanogaster, Sw. Class. B. ii. p. 300 (1837). vol. xx. Chrysotis cyanogaster, G. R. Gr. Gen. B. ii. p. 422, n. 17 (1846); id. List Psitt. Brit. Mus. p. 85 (1859).

Amazona cyanogaster, Schleg. Mus. P.-B. Psittaci, p. 66 (1864); id. op. cit. Revue, p. 30 (1874).

a. op. cit. Reviee, p. 50 (184).
b. do? (1868); Pelz. Orn.
Bras. pp. 261, 442, liii (1871); Gieb. Thes. Orn. iii. p. 189 (1877).
Triclaria cyanogaster, Rehnw. Vogelbild. t. xxvi. f. 8 (1878-83); id.
Journ. f. Orn. 1881, p. 352 (Consp. Psitt. p. 192).

Adult male. Green; ehin and thighs slightly tinged with blue; middle of the abdomen and also of the lower breast purple-blue; outer web of the first primary blue, the next three or four primaries tinged with blue towards the tip of the outer webs; greater under wing-coverts and inner webs of the primaries below verditer-blue; tail-feathers green, tipped with blue, the outer one tinged with blue also on the outer web; tail underneath uniform verditer-blue; bill horn-white; feet brownish; iris brown. Total length 12·2 inches, wing 6·4, tail 4·7, bill 0·95, tarsus 0·58.

Female. Smaller than the male and with the abdomen entirely green, having no blue patch in the middle; besides, the under surface

of the tail is more greenish.

Young males have the blue patch on the abdomen much smaller. Hab. South-eastern Brazil.

a, b. Ad. st.	S. America.	Baron Laugier's Coll.
c. Ad. st.	S. America.	Gould Coll.
d. Ad. sk.	Brazil.	Salvin-Godman Coll.
e. ♀ ad. sk.	Ypanema, Brazil, Sept. (Nat- terer).	Salvin-Godman Coll.
f. Imm. sk.	Brazil.	Tweeddale Coll.
$g, h. \ Q \ ad. \ et$	Brazil.	Sclater Coll.

#### 22. PIONOPSITTACUS.

Range. From Central America to Guiana, Brazil, Upper Amazon, and Paraguay.

# Key to the Species.

- Inner webs of the tail-feathers with no yellow colour.
  - a'. Upper wing-coverts black..... melanotis, p. 339.
  - b'. Upper wing-coverts never black.

    a''. Axillaries green.

a". Bend of the wing blue; pileum red in the malc; forehead blue in the ..... v pileatus, p. 340.  $b^{\prime\prime\prime}$ . Bend of the wing and also small upper wing-coverts and under wingcoverts purple or vinous red. a<sup>4</sup>. Base of the tail green ..... pyrrhops, p. 341. b4. Base of the tail dull red ..... amazoninus, p. 342. b''. Axillaries scarlet; base of the tail red on the inner webs of the feathers; earcoverts red. c'''. No rose-red collar below the blackish throat ..... hæmatotis, p. 343. d"'. A rose-red collar below the blackish coccineicollaris, p. 344. throat b. Inner webs of the tail-feathers yellow, except at the tip. c". Under wing-coverts green; head black. caica, p. 345. d". Under wing-coverts scarlet. 

#### 1. Pionopsittacus melanotis.

Pionus melanotis, Lafr. Rev. Zool. 1847, p. 67; Des Murs, Icon. Orn. pl. 60 (1847).

Psittacus melanotis, G. R. Gr. Gen. B. App. p. 20 (1849); id. List

Psitt. Brit. Mus. p. 74 (1859).

Caica melanotis, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 112; id. Naumannia, 1856, Consp. Psitt. n. 110; G. R. Gr. Hand-list, ii. p. 161, n. 8295 (1870).

Amazona melanotis, Schleg. Mus. P.-B. Psittaci, p. 67 (1864); id. op. cit. Revue, p. 30 (1874).

Pionias melanotis, Finsch, Papag. ii. p. 412 (1868); Gieb. Thes. Orn. iii. p. 191 (1877).

Pionopsitta melanotis, Salv. Ibis, 1876, p. 496; Sclat. & Salv. P. Z. S. 1879, p. 635.

Eucinetus melanotis, Rchnw. Journ. f. Orn. 1881, p. 355 (Consp. Psitt. p. 195); id. Vogelbild. Nachtr. 109 (1883).

Adult. Green; pileum, lores, nape, sides of the neck, and throat bluish; a band over the eyes, extending beyond them, and cheeks bright yellowish green; the bluish feathers of the throat with green edges; back, rump, scapulars, and upper tail-coverts green; breast, abdomen, and under tail-coverts yellowish green; upper wingcoverts black; bastard-wing and primary-coverts dark blue, black on the inner webs; first primary black, edged with blue on the outer web; the remaining primaries blue on the outer webs, which are narrowly edged with green towards the base and with yellowish towards the tip; outermost secondaries black, the innermost ones edged with green on the outer webs; tertials and the innermost greater upper wing-coverts green; under wing-coverts bluish green, more or less tinged with black near the carpal edge, the inner ones pure green; greater under wing-coverts and inner webs of the quills

below verditer-blue; tail above green, with the tips of the feathers deep blue, the outer tail-feather blue also on the outer web; tail below blue on the apical half, changing into yellowish green on the basal half: bill horn-blue, with the tip paler; feet horn-grey. Total length about 10 inches, wing 6.5, tail 3.7, bill 0.75, tarsus 0.55. *Hab.* Bolivia.

a, b. Ad. sk. Tilotilo, Prov. Yungas, Bolivia Salvin-Godman Coll. (C. Buckley).

### 2. Pionopsittacus pileatus.

Psittacus pileatus, Scop. Ann. I. Hist. Nat. p. 32 (1769); Lath. Ind. Orn. i. p. 125, n. 123 (1790); Bechst. Kurze Ueb. p. 99 (1811); Vieill. N. D. xxv. p. 321 (1817); id. Enc. Méth. iii p. 1370 (1823); Wied, Beitr. iv. p. 247 (1832); Hahn, Orn. Atl., Papag. p. 77, t. 57, 57 (bis) (1836); Brehm, Mon. d. Papag. t. 41 & 42.

Pileated Parrot, Lath. Syn. Suppl. ii. p. 94 (1802); id. Gen. Hist. ii, p. 250 (1822).

Maracana cabexa roxa, Azara, Apunt. Hist. Nat. Parag. i. p. 437 (1803); id. Voy. (ed. Sonn.) iii. p. 70 (1809).

Psittacus erythrocephalus, Vieill. N. D. xxv. p. 372 (1817); id. Enc. Méth. iii. p. 1403 (1823).

Psittacus mitratus, Wied, Reis. Bras. i. p. 262 (1820); Kuhl, Consp. Psitt. p. 70 (1820); Temm. Pl. Col. 207 (1823); Vig. P. Z. S. 1831, p. 36; Less. Tr. d'Orn. p. 200 (1831); Voigt, Cuv. Uebers. p. 744 (1831); Bourj. Perr. pls. 55, 55 b (1837-38); Gulliv. P. Z. S. 1875, p. 489.

Mitred Parrot, Lath. Gen. Hist. ii. p. 262 (1822).

Psittacus Maitaca, Spix, Av. Bras. i. p. 41, t. xxix. f. 1 (3 ad.), t. xxx. (♀) (1824).

Psittacus Azari (sic), Desm. Dict. Sc. Nat. xxxix. p. 124 (1826).

Psittacula pileata, Wagl. Mon. Psitt. p. 615 (1832); Hartl. Syst. Verz. Ges. Mus. p. 88 (1844); G. R. Gr. Gen. B. ii. p. 422, n. 1 (1846); Hartl. Ind. Azar. Ament. p. 18 (1847); Bp. Consp. Av. i. p. 6 (1850); Burm. Syst. Ueb. ii. p. 194 (1856); Pelz. Verh.

z.-b. Ges. Wien, 1865, p. 926 (var.).
Pionopsitta pileata, Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 123;
Souancé, Rev. et Mag. de Zool. 1856, p. 156; Bp. Naumannia,
1856, Consp. Psitt. n. 122; Bolle, Journ. f. Orn. 1856, p. 170; Sclat. Cat. Am. B. p. 356, n. 2128 (1862); Sousa, Mus. Nac. Lisb. Psittaci, p. 13 (1869); Salv. Ibis, 1876, p. 496; Salat. P. Z. S. 1877, p. 838; id. List Vert. An. 8th ed. p. 352 (1883); Jhering, Zeitschr. f. ges. Orn. 1885, p. 165; Berl. Journ. f. Orn. 1887, p. 122.

Psittaculus pileatus, Schleg. Mus. P.-B. Psittaci, p. 30 (1864); id.

op. cit. Revue, p. 7 (1874).

Pionias mitratus, Finsch, Papag. ii. p. 413 (1868); Pelz. Orn. Bras. pp. 262, 447, liii, 1871); Berl. Journ. f. Orn. 1874, p. 283; Gieb. Thes. Orn. iii. p. 192 (1877).
Pionopsitta mitrata, G. R. Gr. Hand-list, ii. p. 162, n. 8298 (1870); Allen, Bull. Am. Mus. Nat. Hist. ii. p. 265 (1889).

Pionias pileatus, Sund. Meth. nat. Av. disp. Tent. p. 69 (1872). Pionopsittacus mitratus, Rehnw. Vogelbild. t. xxiv. f. 5 (1878-83).

Eucinetus pileatus, Rchnw. Journ. f. Orn. 1881, p. 354 (Consp. Psitt. p. 194); id. Vogelbild., Bericht. (1883). Pionopsittacus pileatus, Salv. Cat. B. Strickl, Coll. p. 468 (1882).

Adult male. Green, abdomen and under tail-coverts with a yellowish tinge; pilcum, lores, and a narrow band below the eyes, reaching the upper ear-coverts, red; bend of the wing, carpal edge, bastard-wing, and primary-coverts deep blue; quills deep blue, the outermost primaries, except the first, and the secondaries edged with green on the outer webs; under wing-coverts bluish green, the greater ones and inner webs of the quills below verditer-blue; tail above deep blue, the feathers with the outer edges green, the two central feathers almost entirely green, blue along the middle and at the tip; tail below verditer-green, bluer towards the tips of the feathers: "bill bluish grey, whitish at the tip; feet blackish grey; iris brown-grey" (Max.). Total length about 9 inches, wing 5.7, tail 2.8, bill 0.85, tarsus 0.55.

Female. Like the male, but the forehead tinged with blue; no red whatever on the pileum; crown and occiput green, with an olive tinge.

*Young*. Uniform green, with no red or blue colour on the head; less blue on the wings; pileum with a brown wash (*Max.*).

Hab. South-eastern Brazil and Paraguay.

oll.
nan Coll.
nan Coll.
•
oll.

# 3. Pionopsittacus pyrrhops. (Plate IX.)

Pionopsitta pyrrhops, Salr. Ibis, 1876, pp. 495, 496; Tacz. & Berl. P. Z. & 1885, pp. 119, 121.
Eucinetus pyrrhops, Rehnw. Journ. f. Orn. 1881, p. 356 (Consp. Psitt. p. 196); id. Vogelbild. Nachtr. 111 (1883).

Adult. Green, a little yellower on the breast; forehead, lores, periophthalmic region, anterior part of the cheeks, and chin red; crown with a slight bluish tinge, turning into yellowish towards the forehead; some feathers of the middle of the abdomen have red edges; smaller upper wing-coverts, edge of the wing, and under wing-coverts red; primary-coverts and outer webs of the primaries towards the base blue; secondaries green, with very little blue along the middle of the outer ones; greater under wing-coverts verditer-blue, inner webs of the quills below blue; tail above blue, with the base of the feathers green, below duller: bill pale; feet lead-colour. Total length about 9 inches, wing 5.7, tail 3.4, bill 0.65, tarsus 0.55.

Hab. Ecuador.

Salvin-Godman Coll. ) (Types of a. Ad. sk. Santa Rita, Ecuador (Buckley). Salvin-Godman Coll. ( b. Ad. sk. San Lucas, Ecuador species.) (Buckley). c. Ad. sk. Jima, Ecuador (Buck-Salvin-Godman Coll. ley). d. Ad. sk. Jima, Ecuador (Buck-Sclater Coll. ley). Santa Rite, Ecuador Sclater Coll. e. Ad. sk. (Buckley).

## 4. Pionopsittacus amazoninus.

Psittacus amazoninus, Des Murs, Rev. Zool. 1845, p. 207; id. Icon. Orn. pl. 15 (1845); G. R. Gr. Gen. B. iii. App. p. 20 (1848); Brehm, Mon. d. Papag. t. 51.

Evopsitta amazonina, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 79;

Souancé, Rev. et Mag. de Zool. 1856, p. 153. Euopsitta amazonina, Sclat. P. Z. S. 1855, p. 162.

Pýrilia amazonina, Bp. Naumannia, 1856, Consp. Psitt. n. 77; Souancé, Icon. Perr. pl. xxv. (1857).

Chrysotis amazonina, G. R. Gr. List Psitt. Brit. Mus. p. 85

(1859).

In partner

Piònias amazoninus, Finsch, Papag. ii. p. 417 (1868); Gieb. Thes. Orn. iii. p. 189 (1877).

Pyrilia des mursii, G. R. Gr. Hand-list, ii. p. 165, n. 8346 (1870). Caica amazonina, Sclat. & Salv. Nomencl. Av. Neotrop. p. 114, n. 1 (1873).

Amazona amazonina, Schleg. Mus. P.-B. Psittaci, Revue, p. 30 (1874).

Pionopsitta amazonina, Salv. Ibis, 1876, pp. 495, 496.

Eucinetus amazonicus, Rehnw. Vogelbild. t. xxiv. f. 8 (1878–83).

Eucinetus amazoninus, Rchnw. Journ. f. Orn. 1881, p. 355 (Consp. Psitt. p. 195).

Adult. Green; sinciput, sides of the head, cheeks and chin dull red; lores yellowish; crown, temporal region, and ear-coverts with yellow-orange streaks; occiput, like the remainder of the upper parts, grass-green; throat and upper breast olive-green, lower breast, abdomen, and under tail-coverts pale or yellowish green; small upper wing-coverts, bend of the wing, and small under wing-coverts red; outermost greater upper wing-coverts blue; bastardwing and primary-coverts deeper blue; primaries brown-black, with the bases of the outer webs purple-blue; secondaries blue, broadly edged with green on the outer webs; greater under wing-coverts verditer-blue; inner webs of the quills below blue; tail blue, with the basal half dull red, brighter and deeper above than below: bill horn-grey; feet blackish grey. Total length about 9 inches, wing 6, tail 3·2, bill 0·75, tarsus 0·5.

Juv. Like the adult bird; the yellow streaks on the ear-coverts scarcely visible; face duller red; secondaries green, on the edge of the wing only a few pale red feathers; under wing-coverts greenblue. (Finsch.)

Hab. New Granada.

a. Ad. sk. Salvin-Godman Coll. Bogota. b. Ad. sk. Sclater Coll. Bogota (Ward). c. Ad. sk. Purchased. d. Ad. sk. New Granada. Purchased.

### 5. Pionopsittacus hæmatotis.

Pionus hæmatotis, Sclat. & Salv. P. Z. S. 1860, p. 300; Salv. & Sclat. Ibis, 1860, p. 401, pl. xiii.; Salv. Ibis, 1861, p. 147 (note); Sousa, Mus. Nac. Lisb. Psittaci, p. 13 (1869); Frantz. Journ. f. Orn. 1869, p. 366; G. R. Gr. Hand-list, ii. p. 163, n. 8308 (1870). Caica hematotis, Sclut. P. Z. S. 1862, p. 20; id. Cat. Am. B. p. 356, n. 2126 (1862); Salv. P. Z. S. 1867, p. 158 (Veragua); Sclut. § Salv. P. Z. S. 1870, p. 837; Salv. Ibis, 1871, pp. 87, 96; Sclut. § Salv. Nomencl. Av. Neotrop. p. 114, n. 3 (1873); Salv. Ibis, 1874, p. 329; Zeled. Pr. U.S. Nat. Mus. viii. p. 111 (1885). A mazona hamatotis Salleu Mus. P. R. Psittaci, p. 65 (1811) Amazona hæmatotis, Schleg. Mus. P.-B. Psittaci, p. 65 (1864). Pionias hæmatotis, Finsch, Papag. ii. p. 420 (1868); Gieb. Thes.

Orn. iii. p. 190 (1877); Pelz. u. Lor. Ann. k. naturhist. Hofmus. iii. p. 40 (1888).

Eucinetus hæmatotis, Rchnw. Journ. f. Orn. 1881, p. 355 (Consp. Psitt. p. 195); id. Vogelbild. Nachtr. 110 (1883).

Adult. Green, the abdomen and under tail-coverts lighter; pileum and nape brown-olive, each feather with dark shaft and with a narrow brown-red edge; frontal edge and lores white; an illdefined collar round the neck and the breast brown-olive; sides of the head and throat blackish; on the cheeks a slight reddish-brown tinge; ear-coverts stained with blood-red; chin sometimes white; sides of the breast and axillaries bright red; the outermost upper wing-coverts, below the bend of the wing, deep blue; bastardwing, primary-coverts, and primaries black, washed with deep blue on the outer webs, which show a narrow yellowish edge; secondaries and greater upper wing-coverts with the outer webs light blue, edged with green; small under wing-coverts green, more or less tinged with deep blue, especially near the carpal edge; greater under wing-coverts and inner webs of the quills below verditergreen, sometimes verditer-blue; tail olive-green, with the tip blue, the lateral tail-feathers red on the inner webs except at the tips, the outer feathers deep blue on the outer webs; tail below verditergreen, with the inner webs of the lateral feathers, except at the tip, dull red: bill horn-white; feet pale horn-brown. Total length about 9 inches, wing 5.8, tail 2.5, bill 0.82, tarsus 0.5.

Female. Like the male.

Young. Wants the brown-red narrow edges to the feathers of

Hab. Central America from S. Mexico to Veragua.

Salvin-Godman Coll. San Lorenzo (Cauton de a. Ad. sk. Cordova), Mexico, June (Ferrari-Perez). Salvin-Godman Coll. ) Types Rashché, Vera Paz, March b. Ad. sk. (O. Salvin). Salvin-Godman Coll. ( species. c. Ad. sk. Choctum, Vera Paz, Jan. (O. Sulvin).

d Ad. sk.	Choctum, Vera Paz, Jan. (O. Salvin).	Salvin-Godman Coll.
e. Ad. sk.	Choctum, Vera Paz, Jan. (O. Salvin).	Tweeddale Coll.
f. Ad. sk.	Vera Paz.	Salvin-Godman Coll.
g. Ad. sk.	Vera Paz, Jan. (O. Salvin).	Sclater Coll.
h, i.  dad.  sk.	Yaxcamnal, Guatemala (O. Salvin).	Salvin-Godman Coll.
k. Ad. sk.	Guatemala.	Salvin-Godman Coll.
l. Ad. sk.	Sources of Sarstoon River, Guatemala, March (O. Salvin).	Salvin-Godman Coll.
m. Ad. sk.	San Pedro, Honduras (H. Whitely).	Sclater Coll,
n. Ad. sk.	San Pedro, Honduras (G. M. Whitely).	Salvin-Godman Coll.
o. Ad. sk.	Orange Walk, Brit. Hon- duras, December (G. F. Gaumer).	Salvin-Godman Coll.
p. ♂ ad. sk.	Angostura, Costa Rica, January (J. Carmiol).	Salvin-Godman Coll.
q, r. ♂♀ ad.	Santa Fé, Veragua ( $Arc\acute{e}$ ).	Salvin-Godman Coll.

### 6. Pionopsittacus coccineicollaris.

Pionus hæmatotis?, var., Lawr. Ann. Lyc. N. Y. vii. p. 299 (1862) (Panama); G. R. Gr. Hand-list, ii. p. 163, n. 8308 (partim) (1870).

Pionius coccinicollaris, Lawr. Ann. Lyc. N. Y. vii. p. 475 (1862) (Panama).

Caica hæmatotis, Sclat. & Salv. P. Z. S. 1864, p. 368 (Panama); Salv. Ibis, 1871, pp. 87, 96 (part.); id. Nomencl. Av. Neotrop. p. 114, n. 3 (1873) (part.)

Pionias hæmatotis (part.), Finsch, Papag. ii. p. 420 (1868); Gieb.

Thes. Orn. iii. p. 190 (1877) (part.).
Pionius coccineicollis, Index P. Z. S. 1800-70, p. 385 (1872); "Lawr." (errore), Gieb. Thes. Orn. iii. p. 190 (in syn. P. hæmatotis) (1877).

Caica coccineicollaris, Salv. Ibis, 1871, p. 96.

Amazona hæmatotis, Schleg. Mus. P.-B. Psittaci, Revue, p. 29 (Panama) (1874).

Eucinetus hæmatotis, Rchnw. Journ. f. Orn. 1881, p. 355 (Consp. Psitt. p. 195) (part.); id. Vogelbild. Nachtr. 110 (1883) (part.).

Similar to P. hamatotis, but with a rose-red collar below the black of the throat; apparently the feathers of the pileum are never edged with brown-red, but constantly with olive-brown; the white on the chin seems constant.

Hab. Panama.

As already noticed by Mr. Salvin, the red collar below the black of the throat is a feature possessed by the Panama bird only, not even the Santa-Fé examples showing any indication of it. This marking is absent in some specimens from Panama, and these can only be distinguished by the darker feathers of the pileum having olive-brown edges.

 $a, b, c. \beta \supseteq ad. sk.$ Salvin-Godman Coll. Isthmus of Panama (Mc-Leannan). d. Ad. sk. Paraiso Station, Isthmus Salvin-Godman Coll. of Panama (A. Hughes). e. Ad. sk. Sclater Coll. Panama. f. Ad. sk. Panama? Lieut. Davies [P.].

### 7. Pionopsittacus caica.

Perruche à tête noire de Cayenne, D'Aubent. Pl. Enl. 774.

Caïca, Buff. Hist. Nat. Ois. vi. p. 253 (1779).

Hooded Parrot, Lath. Gen. Syn. i. p. 306, n. 313 (1781); id. Gen.

Hist, ii. p. 257 (1822). Psittacus histrio, Bodd, Tabl. Pl. Enl. p. 46 (1783) (nec Müll. 1776); G. R. Gr. Gen. B. ii. p. 421, n. 17 (1846); id. List Psitt. Brit. Mus. p. 74 (1859).

Psittacus pileatus, Gm. (nec Scop.) S. N. i. p. 347, n. 125 (1788); Bechst. Kurze Ueb. p. 102 (1811-12); Kuhl, Consp. Psitt. p. 61 (1820); Voigt, Cuv. Uebers. p. 746 (1831); Less. Tr. d'Orn. p. 198 (var. excl.) (1831); Cab. in Schomb. Guiana, iii. p. 723 (1848). Psittacus caïca, Lath. Ind. Orn. i p. 128, n. 137 (1790); Shaw, Gen. Zool. viii. 2, p. 542 (1811); Vieill. Enc. Méth. iii. p. 1403

(1823).

Le Perroquet Caïca, Levaill. Perr. pl. 133 (1805).

? Crowled Parrot, Lath. Gen. Hist. ii. p. 259 (Trinidad) (1822).

Psittacula pileata, Steph. Gen. Zool. xiv. p. 142 (1826).

Pionus caïca, Wagl. Mon. Psitt. p. 609 (1832). Poicephalus pileatus, Sw. Class. B. ii. p. 301 (1837).

Psittacus melanocephalus, Brehm, Mon. d. Papag. t. 52 (1854).

Caica pileata, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 109; Souancé, Rev. et Mag. de Zool. 1856, p. 155; Bp. Naumannia, 1856, Consp. Psitt. n. 109.

Pionus pileatus, *Burm. Syst. Ueb.* ii. p. 193 (note) (1856). Caica histrio, *Sclat. P. Z. S.* 1857, p. 266; *id. Cat. Am. B.* p. 355, n. 2125 (1862); G. R. Gr. Hand-list, ii. p. 161, n. 8293 (1870); Sclat. § Salv. Nomencl. Av. Neotrop. p. 114, n. 6 (1873); iid. P. Z. S. 1873, p. 300; Salv. Ibis, 1886, p. 69; Tacz. Orn. Pér. iii. p. 228, Tabl. p. 100 (1886).

Amazona histrio, Schleg. Mus. P.-B. Psittaci, p. 64 (1864); id. op.

cit. Revue, p. 29 (1874).

Pionias histrio, *Finsch*, *Papag*. ii. p. 429 (1868); *Pelz. Orn. Bras.* pp. 262 (note), 449 (1871); *Gieb. Thes. Orn.* iii. p. 190 (1877).

Eucinetus histrio, Rehnw. Vogelbild. t. xxiv. f. 6 (1878-83); id. Journ. f. Orn. 1881, p. 356 (Consp. Psitt. p. 196).

Adult male. Green, lighter and brighter below; the under tailcoverts yellowish green; head black; feathers of the hind neck tawny, with brown edges, producing a scale-like appearance; throat and upper breast olive-brown; bastard-wing and primarycoverts deep blue, edged with green on the outer edges; primaries black, the first uniform, the remaining with green outer edges; under wing-coverts green, the greater ones and the inner webs of the quills below malachite-green; tail green, with the tip above blue, below green; inner webs, except at the tips, of the lateral tail-feathers vellow: bill pale horn-colour; cere darker; feet dusky; "iris red-hazel" (H. Whitely). Total length about 9 inches, wing 5.7, tail 2.7, bill 0.74, tarsus 0.5.

Female. Like the male.

Young. Pileum green, cheeks olive-green; a collar round the neck olive-brown: no dark edges to the feathers of the hind neck.

Hab. Cavenne, British Guiana, and perhaps also on Rio Javarri,

Upper Amazons.

I have only been able to examine specimens from Guiana: the one in the Sclater Collection, said to be from Para, was obtained from a dealer, and has no reliable locality on the label; specimens from Rio Javarri, collected by Bates (P. Z. S. 1857, p. 266), are not in the British Museum.

a. Ad. st.	S. America.	Purchased.	
b. Ad. sk.		Gould Coll.	
c. Ad. sk.	S. America.	Purchased.	
d. Ad. sk.	[Para] S. America.	Sclater Coll.	
e. Ad. sk.	Demerara.	Salvin-Godman Coll.	
f. Ad. sk.	British Guiana.	Salvin-Godman Coll.	
$g, h. i. o \circ \varphi \text{ ad.};$	Bartica Grove, British Guiana,	Salvin-Godman Coll.	
♀ juv. sk.	May, August, & September		
	(H. Whitely).		
k, l. Juv. sk.	River Carimang, Brit. Guiana,	Salvin-Godman Coll.	
,	July & August (II. Whitely).		

## 8. Pionopsittacus barrabandi.

Le Caica Barraband, Levaill. Hist. Perr. ii. p. 102, pl. 134 (1805).

Psittaeus Caïca, var., Shaw, Gen. Zool. viii. 2, p. 542 (1811). Psittaeus barrabandi, Kuhl. Consp. Psitt. p. 61 (1820); Spix, Av. Bras. i. p. 45 (1824); Voigt, Cuv. Uebers. p. 746 (1831); G. R. Gr. Gen. B. ii. p. 421, n. 18 (1846); Brehm, Mon. d. Papag. t. 53; G. R. Gr. List Psitt. Brit. Mus. p. 24 (1859).

Psittacula barrabandi, Steph. Gen. Zool. xiv. p. 142 (1826).

Psittacus pileatus, var., Less. Tr. d'Orn. p. 198 (1831).

Pionus barrabandi, Wagl. Mon. Psitt. p. 610 (1832); Burm. Syst. Ueb. ii. p. 193 (note) (1856).

Poicephalus barrabaudi (sic), Sw. Class. B. p. 301 (1837).

Caica barrabandi, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 111; Uaica barrabandi, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 111;
Souancé, Rev. et Mag. de Zool. 1856, p. 155; Bp. Naumaunia,
1856, Consp. Psitt. n. 111; Selat. P. Z. S. 1857, p. 266, 1858,
p. 76; Selat. § Salv. P. Z. S. 1866, p. 197, 1867, p. 753; Sousa,
Mus. Nac. Lisb. Psittaei, p. 12 (1869); G. R. Gr. Hand-list, ii.
p. 161, n. 8294 (1870); Selat. § Salv. Nomencl. Av. Neotrop.
p. 114, n. 4 (1873); iid. P. Z. S. 1873, p. 300; Tacz. Orn. Pér.
iii. p. 229, Tabl. p. 100 (1886); Garl. Journ. f. Orn. 1889,
p. 291; Berl. Journ. f. Orn. 1889, p. 317.
Amazona barrabandi, Schleg. Mus. P.-B. Psittaci, p. 65 (1864); id.
on cit. Revue, p. 30 (1874).

op. cit. Revue, p. 30 (1874).

Pionias barrabandi, Finsch, Papag. ii. p. 425 (1861); Pelz. Orn. Bras. pp. 262, 447, liii (1871).

Pionias barrabaudi (sic), Gieb. Thes. Orn. iii. p. 189 (1877).

Eucinetus barrabandi, Rchnw. Vogelbild, t. xxiv. f. 4 (1878-83); id. Journ. f. Orn. 1881, p. 357 (Consp. Psitt. p. 197).

Adult. Green, the abdomen with a slight bluish tinge; head and chin black; cheeks orange-yellow, surrounded underneath by a black band, joining the black chin; throat and breast olive; thighs yellow, sometimes tinged with red; smaller upper wing-coverts along the cubital edge orange-yellow, with the base of the feathers red; bastard-wing, primary-coverts, and primaries black, with a blue tinge; secondaries and greater upper wing-coverts black, with the outer webs blue, edged with green, the green colour increasing on the inner feathers; carpal edge and the whole of the under wingcoverts orange-vermilion, the feathers along the carpal edge bordered with orange; inner webs of the quills below green; tail above green, with the tip blue, the inner webs of the lateral feathers, except at the tip, yellow; tail below green, with the inner webs of the lateral feathers, except at the tip, yellow: bill hornbrown: feet dusky green (?); "iris red" (Spix). Total length about 10 inches, wing 6.7, tail 2.7, bill 0.87, tarsus 0.6.

Female. Like the male.

Young. Pileum brown; feathers of the forehead, nape, cheeks, and chin olive, edged with brown; cubital edge green, with a few yellow feathers; a few green feathers along the metacarpal edge and among the greater under wing-coverts; primaries edged with yellow towards the tip of the outer webs.

Hab. Upper Amazon Valley to the base of the Andes.

The statement that this species is found also in British Guiana rests only on the specimen mentioned below as collected there by R. Schomburgk; but as the species is not mentioned in Schomburgk's 'Reise,' I suppose there is some mistake about that locality.

Taczanowski and perhaps other ornithologists describe the female as differing from the male, but I have no doubt they have mistaken

the young bird for the female.

a. Ad. st. [British Guiana.] Sir R. Schomburgk [P.]. b. 3 ad. sk. Marabitanas, Brazil, March Sclater Coll. (Natterer). Marabitanas, Brazil, April c. 2 ad. sk. Salvin-Godman Coll. (Natterer). d. Ad. sk. R. Amazons. Purchased. e. Ad. sk. Purchased. Salvin-Godman Coll. f, g. Ad. sk. Napo, Ecuador (Buckley). h, i. Ad. et Sarayacu, Leuador (Buck-Salvin-Godman Coll. juv. sk. k. ♀ juv. sk. l. ♀ ad. sk. Sarayacu, Ecuador (Buckley). Sclater Coll. Loretoyacu, Upper Amazons, Sclater Coll. November (Hauxwell).  $m, n. \beta \subsetneq ad.$ Samiria, Upper Amazons, Salvin-Godman Coll. sk. November (Hauwwell).

# 9. Pionopsittacus pyrilia.

Psittacula pyrilia, Bp. Compt. Rend. xxxvii. p. 807 (note) (1853);
id. Not. Coll. Delattre, p. 2 (note) (1854).
Evopsitta pyrilia, Bp. Rev. et May. de Zool. 1854, p. 151, p. 78.

Pyrilia typica, Bp., Naumannia, 1856, Consp. Psitt. n. 76; Souancé, Icon. Perr. pl. xxvi. (1857).

Chrysotis pyrilia, G. R. Gr. List Psitt. Bvit. Mus. p. 84 (1859). Pionias pyrilia\*, Finsch, Papag. ii. p. 419 (1868); Gieb. Thes. Orn. iii. p. 192 (1877).

Pionias pyrilias, Finsch, op. eit. ii. 2, p. 962 (1868).

Pyrilia pyrilia, G. R. Gr. Hand-list, ii. p. 165, n. 8347 (1870).

Caica pyrilia, Sclat. § Salv. Nomeucl. Av. Neotrop. p. 14, n. 2 (1873);
Wyatt, Ibis, 1872, pp. 126, 381; Sclat. § Salv. ibid. (note); iid.
P. Z. S. 1875, pp. 237, 238, 1879, p. 538; Berl. Journ. f. Orn. 1884, p. 319.

Eucinetus pyrillus, Rehnw. Journ. f. Orn. 1881, p. 386 (Consp. Psitt. p. 196); id. Vogelbild. Nachtr. 112 (1883).

Adult. Green, paler underneath; head and throat yellow; earcoverts washed with red; nape, throat, and upper breast olive; thighs with some yellow and red feathers; small upper wing-coverts along the cubital edge yellow, with the bases red; the outermost median wing-coverts partly blue, the greater ones blue, edged with green; bastard-wing and primary-coverts black; primaries black, with a blue tinge and narrow blue-green edges; the first primary entirely black; secondaries black-blue, with green edges on the outer webs; the whole of the under wing-coverts, and also the axillaries, the sides, and the carpal edge red; inner webs of the quills underneath green; tail above green, with the tip blue; the inner webs of the lateral tail-feathers, except at the tip, vellow; the outer tail-feather has the outer web blue; tail underneath green, slightly bluish at the tip, and yellowish on the inner webs of the feathers: bill horn-white; feet dusky (olive?): "iris dark brown; naked skin round the eyes white "(Wyatt). length about 9 inches, wing 5.8, tail 28, bill 0.75, tarsus 0.5.

Female. Like the male.

Young. No yellow on the head, which is green, with an olive tinge on the sides; threat clive, like the upper part of the breast; no yellow on the smaller upper wing-coverts, which are green; metacarpal edge green, with a few red feathers; smaller under wing-coverts red, but the greater ones green; the primaries have narrow yellow edges towards the tips.

Hab, Colombia and Venezuela.

a. Ad. sk.	Colombia (Wyatt).	Sclater Coll.
b. of ad. sk.	Naranjo, Magdalena Valley (Wyatt).	Salvin-Godman Coll.
c. Ad. sk.	Between Quito and Bogota (Villagomez).	Salvin-Godman Coll.
d. $d$ ad. $sk$ .	San Christoval, Venezuela (Goering).	Salvin-Godman Coll.
e. Ad. sk.	Medellin, U.S. of Colombia (Salmon).	Sclater Coll.
$f,g.$ $\eth$ $Q$ ad. sk.	Remedios, U.S. of Colombia (Salmon).	Salvin-Godman Coll.
h. $Q$ juv. sk.	Remedios, U. S. of Colombia (Salmon).	Sclater Coll.

<sup>\*</sup> An potius pyrilla, Finsch, l. c. (note)?

#### 23. GYPOPSITTACUS.

Type.

Gypopsitta, Bp. Nzumannia, 1856, Consp. Psitt. gen. 25. G. vulturinus.

Range. Lower Amazon Valley.

# 1. Gypopsittacus vulturinus.

Psittaeus vulturinus, *Ill. in Mus. Berol.*; Kuhl, Consp. Psitt. p. 62 (1820); Loss. Tr. d'Orn. p. 199 (1831); Bourj. Perr. pl. 59 (1837-38); G. R. Gr. Gen. B. ii. p. 421, n. 19 (1846); id. List Psitt. Brit. Mus. p. 74 (1859).

Psittacula? vulturina, Steph. Gen. Zool, xiv. p. 142 (1826).

Pionus vulturinus, Wagl. Mon. Psitt. p. 610, t. xxiv. f. 1 (1832);

Burm. Syst. Ueb. ii. p. 194 (note) (1856).

Caica vulturina, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 113;
Sclat. & Salv. P. Z. S. 1867, pp. 588, 595; Sousa, Mus. Nac. Lisb.
Psittaci, p. 12 (1869); Sclat. & Salv. Nomencl. Av. Neotrop. p. 114, n. 5 (1873).

Gypopsitta vulturina, Bp. Naumannia, 1856, Consp. Psitt. n. 112;

G. R. Gr. Hand-list, ii. p. 162, n. 8296 (1870).

Amazona vulturina, Schleg. Mus. P.-B. Psittaci, p. 66 (1864); id.

op. cit. Revne, p. 30 (1874).

Pionias vulturinus, Finsch, Papag. ii. p. 427 (1868); Pelz. Orn. Bras. pp. 262, 447, liii (1871); Gieb. Thes. Orn. iii. p. 193 (1877).
Eucinetus vulturinus, Rehnw. Vogelbild. t. xxiv. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 357 (Consp. Psitt. p. 197).

Adult. Green, abdomen with a bluish tinge: head naked, or, rather, covered with hairs; bare skin of the head black, except on the forehead and lores, where it is light, perhaps whitish; the hairs are black on the black skin, and whitish on the forehead and lores; the naked head surrounded behind by a broad band, formed by yellow feathers tipped with black; nape blackish; throat oliveyellow, with the feathers edged with black; thighs yellow stained with red; smaller upper wing-coverts orange, the innermost ones, the carpal edge, and the whole of the under wing-coverts red; on the bend of the wing the orange feathers are tinged with red; some of the outermost median and greater upper wing-coverts blue, edged with green; bastard-wing, primary-coverts, and primaries black, with the outer webs deep blue; secondaries black, with the outer webs green, passing into blue towards the tips; inner webs of the quills below green; tail green, with the tip blue above and green below, the inner webs of the tail-feathers, except at the tip, yellow: bill horn-grey, darker at the tip and along the culmen; cere whitish; feet brown. Total length about 9 inches, wing 6.2, tail 2.8, bill 0.8, tarsus 0.5.

Young. Head naked only on the forehead and lores, the rest covered with short green feathers, yellowish at the bases; similar feathers cover also the hind neck, which is not black; the orange band along the cubital edge and also the red carpal edge are partly green; the greater under wing-coverts partly green.

Hab. Lower Amazon Valley, from Para to Borba.

a. Ad. st. S. America (A. R. Wallace?). Purchased. b. Juv. sk. Para (A. R. Wallace). Sclater Coll. Salvin-Godman Coll. c. dimm.sk. Amazons (Orton). 24. UROCHROMA. Type. Pyrrhulopsis, Bp. (nec Rchnb.) Rev. et Mag. de Zool. 1854, p. 152 Touit, G. R. Gr. List Gen. & Subg. B. p. 89, n. U. hueti. 1508 (1855) . . . . . . . . . . . . U. hueti. Urochroma, Bp. Naumannia, 1856, Consp. Psitt. gen. 30 . . . . . . U. hueti. Urochroa, Sund. Meth. nat. Av. disp. Tent. p. 70 (1872) (nom. emend.) (nec Gould, 1856) ..... U. purpurata. Euchroura, Rehnw. Journ. f. Orn. 1881, p. 351... U. purpurata. Range. From Colombia and Guiana to the Amazon Valley, and South-eastern Brazil. Key to the Species. a. Scapulars black or brown. a'. Back and scapulars blackish brown; underparts glaucous, or grevish green. a''. Wing with a broad greenish-yellow band on the greater upper wing-coverts; smaller and median upper wing-coverts black .... v cingulata, p. 351. b". No yellow band on the wing; rump black; upper wing-coverts green; lateral tailfeathers red, with a broad black band near the tips ..... wiedi, p. 352. b'. Back green, contrasting with the black or brown scapulars. c'. Rump blue; tail purple-red; female with a green band at the tip of the tail..... purpurata, p. 353. d". Rump with no distinct blue patch, only with a slight bluish tinge; tail ochreyellow ..... *surda*, p. 354. b. Scapulars green, like the back. c'. Forehead and anterior part of the cheeks, or forehead alone, blue. e". Under wing-coverts, except the greater ones, and axillaries red; tail in the male purplered, green in the female...... hueti, p. 355. f". Outermost under wing-coverts red, the innermost ones and axillaries yellow; tail mostly yellow, with a black band at the tip. dilectissima, p. 356. d'. Head entirely green, with no blue whatever; under wing-coverts green; tail green, with a brown-yellow tinge on the inner webs of the lateral tail-feathers and below. g''. Upper wing-coverts brown, with lighter tips; outermost upper greater wing-coverts orange ..... stictoptera, p. 357. h". Upper wing-coverts green, black in the

middle, none of them orange.....

emmæ, p. 357.

# 1. Urochroma cingulata.

Petite Perruche de l'Isle de Luçon, cinquième espèce, Sonner. Voy. à la Nouv. Guin. p. 78, pl. 41 (1776); Wald. Tr. Zool. Soc. ix. p. 137 (1875); Tweedd. Orn. Works, p. 305 (1881).

Black-winged Perroquet, Brown, Illustr. pl. viii. (1776); Lath. Syn. i. p. 316 (1781); id. Gen. Hist. ii. p. 270 (1822).

Petite Perruche de Batavia, D'Aubent. Pl. Enl. 791. f. 1.

Perruche aux ailes variées, Buff. Hist. Nat. Ois. vi. p. 172 (1779).

Psittaca batavica, Bodd. Tabl. Pl. Enl. p. 49 (1783).

Psittacus cingulatus, Scop. Del. Flor. et Faun. Insubr. p. 86, n. 22 (1786).

Psittacus melanopterus, Gm. (nec Scop.) S. N. i. p. 350, n. 132 (1788); Lath. Ind. Orn. i. p. 132, n. 152 (1790); Shaw, Nat. Misc. pl. 132 (1793); id. Gen. Zool. viii. 2, p. 548, pl. 83 (1811); Vieill. N. D. xxv. p. 373 (1817); Kuhl, Consp. Psitt. p. 60 (1820); Vieill. Enc. Méth. iii. p. 1404 (1823); Vorgt, Cuv. Uebers. p. 746 (1831).

Le Perruche Javane, Levaill. Perr. pl. 69 (1801).

Psittacus micropterus, Kuhl, Consp. Psitt. p. 67 (1820) (ex Sonnerat);

Voigt, Cuv. Uebers. p. 747 (1831).

Psittacula melanoptera, Steph. Gen. Zool. xiv. p. 142 (1826); Less. Tr. d'Orn. p. 201 (1831); Wagl. Mon. Psitt. p. 619 (1832); Hartl. Syst. Verz. Ges. Mus. p. 88 (1844); Burm. Syst. Ueb. ii. p. 197 (note) (1856).

Psittacula batavica, G. R. Gr. Gen. B. ii. p. 423, n. 5 (1846); id. List Psitt. Brit. Mus. p. 87 (1859); Léot. Ois. de l'île de la Trinid.

p. 331 (1866).

Pyrrhulopsis melanopterus, Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 127; Souancé, Rev. et Mag. de Zool. 1856, p. 156; Sousa, Mus. Nac. Lisb. Psittaci, p. 13 (1869).

Urochroma melanoptera, Bp. Naumannia, 1856, Consp. Psitt. n. 129; Sclat. Cat. Am. B. p. 356, n. 2129 (1862); Taylor, Ibis, 1864, p. 94; Sclat. § Salv. P. Z. S. 1868, p. 169 (Venezuela).

Psittacula cingulata, Schleg. Mus. P.-B. Psittaci, p. 69 (1864); Finsch, Papag. ii. p. 678 (1868); id. P. Z. S. 1870, pp. 533, 586; Schleg. op. cit. Revue, p. 30 (1874); Gieb. Thes. Orn. iii. p. 327 (1877).

Loriculus (Cyclopsitta?) micropterus, v. Mart. Journ. f. Orn. 1866, p. 22.

Urochroma batavica, G. R. Gr. Hand-list, ii. p. 167, n. 8359 (1870).

Urochroma eingulata, Sclat. & Salv. Nomencl. Av. Neotrop. p. 115, n. 4 (1873); Salv. Cat. B. Strickl. Coll. p. 469 (1882).

Eucinetus cingulatus, Rehnw. Vogelbild. t. xxiv. f. 2 (1878-83). Euchroura cingulata, Rehnw. Journ. f. Orn. 1881, p. 360 (Consp.

Psitt. p. 200).

Adult male. Head and neck green-yellow, yellower on the forehead; on the nape and on the sides of the neck the feathers have darker edges, producing a scale-like appearance; back, rump, scapulars, and smaller and median upper wing-coverts black; median upper tail-coverts black, the longest greenish, the lateral ones vellowish green; underparts glaucous, greener on the abdomen and under tail-coverts; greater upper wing-coverts green yellow, passing into green and then into blue at the apical half; bastard-

wing and primary-coverts black; quills black, the primaries with narrow green edges on the outer webs, the tertials green-vellow on the outer webs; metacarpal edge with a rose-coloured longitudinal mark; under wing-coverts near the edge of the wing black, the remainder blue, but the greater ones, like the inner webs of the quills below, verditer-blue; tail pink rose-colour, with a mauve mark, the two central feathers nearly uniform, the lateral ones with a black band near the tip: "bill whitish yellow; feet pale; iris brown" (Léotaul). Total length about 6.4 inches, wing 4.6, tail 1.9, bill 0.7, tarsus 0.4.

Female. Like the male (Léotaud).

Young. More bluish on the breast, and with the tail-feathers more reddish (*Léctaud*).

Hab. Trinidad and Venezuela.

a. Ad. st.	S. America.	Baron Laugier Coll.
b. Ad. sk.	S. America.	Baron Laugier Coll.
c. Ad. sk.	S. America.	Purchased.
d. Ad. sk.	Trinidad.	Sclater Coll.
e. Ad. sk.	Trinidad.	Salvin-Godman Coll.
f. Ad. sk.	Caracas, Venezuela (Goering).	Sclater Coll.
g, h, i. Ad. sk.	Caracas, Venezuela.	Tweeddale Coll.
k. Ad. sk.	Venezuela.	Tweeddale Coll.
l. Ad. sk.	[Cayenne] (Jelski).	Salvin-Godman Coll.

#### 2. Urochroma wiedi.

Psittacus melanonotus, Licht. (nec Shaw) in Mus. Berol.; Wied, Reis. Bras. i. p. 275 (1820); Kuhl, Consp. Psitt. p. 59 (1820).

Psittacus erythrurus, Pr. Mavim., fide Kuhl, l. c. (nec Kuhl). Coffee-backed Parrot, Lath. Gen. Hist. ii. p. 262 (1822).

Psittacula melanotus, Steph. Gen. Zool. xiv. p. 142 (1826); Less. Tr. d'Orn, p. 202 (1831).

Psittacus melanotus, Wied, Beitr. iv. p. 256 (1832); Hahn, Orn. Atl., Papag. p. 83, t. 63 (1836).

Psittacula melanota, Wagl. Mon. Psitt. p. 620 (1832); Hartl. Syst. Verz. Ges. Mus. p. 88 (1844); G. R. Gr. Gen. B. ii. p. 423, n. 6 (1846).

Psittacula melanonota, Bourj. Perr. pl. 95 (1837–38); Burm. Syst. Ueb. ii. p. 196 (1856); G. R. Gr. List Psitt. Brit. Mus. p. 87 (1859); Schleg. Mus. P.-B. Psittaci, p. 70 (1864); Finsch, Papag. ii. p. 675 (1868); Pelz. Orn. Bras. pp. 268 (note), 449 (1871); Schleg. Mus. P.-B. Psittaci, Revue, p. 31 (1874); Gieb. Thes. Orn. iii. p. 328 (1877). Psittacula melanonotus, Licht. Nomencl. Av. p. 71 (1854).

Pyrrhulopsis melanotus, Bp. Rev. et Mag. de Zool. 1854, p. 152,

n. 130; Souancé, Rev. et Mag. de Zool. 1856, p. 156.

Urochroma melanonota, Bp. Naumannia, 1856, Consp. Psitt. n. 128; Sclat. Cat. Am. B. p. 356, n. 2130 (1862); G. R. Gr. Hand-list, ii. p. 167, n. 8360 (1870); Sclat. & Salv. Nomencl. Av. Neotrop. p. 115, n. 3 (1873); Salv. Cat. B. Strickl. Coll. p. 469 (1882).

Pyrrhulopsis melanonotus, Sousa, Mus. Nac. Lisb. Psittaci, p. 13

(1869).

Euchroura melanonota, Rchnw. Journ. f. Orn. 1881, p. 359 (Consp. Psitt. p. 199); id. L'ogelbild. Nachtr. 114 (1883).

Urochroma wiedi, Allen, Bull. Am. Mus. Nat. Hist. ii. p. 264 (1889).

Adult. Green; back, scapulars, and rump brownish black; checks, throat, flanks, and under tail-coverts light green; breast and abdomen glaucous with a greenish tinge; primary-coverts and secondaries brown-black; primaries black, edged with green on the outer webs; along the metacarpal edge an obscure dull reddish mark; greater under wing-coverts and inner webs of the quills below glaucous green; two central tail-feathers green, the lateral ones red at the base, and with a broad black band near the tip; which is green; the outer tail-feather purple on the outer web: "bill dusky yellowish, brownish grey on the edges and at the tip; feet yellowish grey; iris brownish grey" (Wied). Total length 6·2 inches, wing 4·1, tail 1·6, bill 0·6, tarsus 0·42.

Female. Like the male, only a little duller.

Hab. South-eastern Brazil.

a. Ad. sk.b. Ad. sk.Brazil,

c. Ad. sk. Bahia (Wucherer).

Purchased. Sclater Coll. Salvin-Godman Coll.

### 3. Urochroma purpurata.

Purple-tailed Parrakeet, Lath. Syn. i. p. 315, n. 121 (1781); id. op. cit. Suppl. ii. p. 95, n. 27 (1802); id. Gen. Hist. ii. p. 268 (1822).
Psittacus purpuratus, Gm. S. N. i. p. 350, n. 130 (1788); Lath. Ind. Orn. i. p. 132, n. 150 (1790); Kuhl, Consp. Psitt. p. 60 (1820); Vieill. Enc. Méth. iii. p. 1410 (1823); Cab. in Schomb. Guian. iii. p. 723 (1848).

Psittacus porphyrurus, Shaw, Nat. Misc. p. 547, pl. 16 (1790); id. Gen. Zool. viii. 2, p. 547 (1811).

Psittacus marginatus, Vieill. (nec Lath.) N. D. xxv. p. 379 (1817). Psittacula purpurata, Steph. Gen. Zool. xiv. p. 142 (1826); Less. Tr. d'Orn. p. 203 (1831); Wagl. Mon. Psitt. p. 618 (1832); G. R. Gr. Gen. B. ii. p. 423, n. 3 (1846); Burm. Syst. Ueb. ii. p. 197 (note) (1856); G. R. Gr. List Psitt. Brit. Mus. p. 88 (1859); Schley. Mus. P.-B. Psittaci, p. 68 (1864); Finsch, Papag. ii. p. 680 (1868); Pelz. Orn. Bras. pp. 261, 449, liv (1871); id. Ibis, 1873, p. 32; Schleg. Mus. P.-B. Psittaci, Revue, p. 30 (1874); Gieb. Thes. Orn. iii. p. 329 (1877).

P Psittacus madagascariensis, Schomb. (nec Briss.) Guian. iii. p. 723 (1848).

Pyrrhulopsis purpuratus, Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 126; Souancé, Rev. et Mag. de Zool. 1856, p. 156; Sousa, Mus. Nac. Lisb. Psittaci, p. 13 (1869).

Pyrrhulopsis porphyrurus, Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 128.

Urochroma purpurata, Bp. Naumannia, 1856, Consp. Psitt. n. 125;
Souancé, Icon. Perr. pl. xxvii. (1857); Sclat. Cat. Am. B. p. 356,
n. 2131 (1862); Sclat. § Salv. P. Z. S. 1867, pp. 589, 595 (note);
G. R. Gr. Hand-list, ii. p. 167, n. 8362 (1870); Sclat. § Salv. Nomencl. Av. Neotrop. p. 115, n. 5 (1873); Salv. Ibis, 1886,
p. 70; W. L. Sclat. Ibis, 1887, p. 317.

Urochroma porphyrura, Bp. Naumannia, 1856, Consp. Psitt. n. 127. Psittacula viridicauda, G. R. Gr. List Psitt. Brit. Mus. p. 88 (♀) (1859); Schleg. Mus. P.-B. Psittaci, p. 68 (1864).

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Urochroma viridicauda, G. R. Gr. Hand-list, ii. p. 167, n. 8363

Eucinetus purpuratus, Rchnw. Vogelbild. in the text of pl. xxiv. f. 3 (1878-83).

Eucinetus viridicauda, Rchnw. Vogelbild. t. xxiv. f. 3 (1878-83).

Euchroura purpurata, Rehnw. Journ. f. Orn. 1881, p. 358 (Consp. Psitt. p. 198).

Euchroura viridicauda, Rchnw. Journ. f. Orn. 1881, p. 359 (Consp. Psitt. p. 199).

Adult. Green, underparts lighter; crown olive-brown, ear-coverts with a brownish tinge; rump blue; sides of the rump, flanks, and upper tail-coverts bright green; scapulars brownish black; sides of the body yellowish green; bastard-wing, primary-coverts, and quills black, with the outer webs edged with green; metacarpal edge purple-blue; greater under wing-coverts and inner webs of the primaries below dull greenish; two central tail-feathers green, tipped with black, the lateral ones purple-red edged with black at the tip and on the outer web: bill lead-colour, yellow towards the tip; feet grey. Total length about 6.8 inches, wing 4.4, tail 1.9, bill 0.65, tarsus 0.4.

Female. Like the male, from which it differs in having the scapulars paler brown and a broad green band at the tip of the lateral tail-feathers; the black edge of the same feathers is confined to the tip, and is wanting on the outer edge.

Hab. Guiana, Cayenne, and Lower Amazons.

Demerara. a. Ad. st. Ad. sk. Demerara. c. Ad. sk. Guiana. d. Ad. sk. British Guiana (H. Whitely). Bartica Grove, British Guiana, Aug. (H. Whitely). e, f. of ad. sk. Roraima, British Guiana, Nov. Salvin-Godman Coll. g. Q ad. sk. (H. Whitely). h. ♂ ad. sk. Cayenne. Oyapoc, Cayenne. i. Ad. sk. Capim River (Wallace). k. 3 ad. sk. l. Ad. st. Brazil.

Sclater Coll. Salvin-Godman Coll. Salvin-Godman Coll.

Purchased.

Purchased.

Riocour Coll. Salvin-Godman Coll. Sclater Coll. Purchased. (Type of P. viridicauda, Gr.) Purchased.

m. Ad. st.

## 4. Urochroma surda.

Psittacus surdus, Ill. in Mus. Berol.; Kuhl, Consp. Psitt. p. 59 (1820); Wied, Beitr. iv. p. 252 (1832); Hahn, Orn. Atl., Papag. p. 55, t. 40 (1835).

Psittacus ochrurus, Princ. Maximil., fide Kuhl, Consp. Psitt. p. 59

Psittacus chryseurus, Sw. Zool. Ill. iii. pl. 141 (1822-23); Isis, 1829, p. 1005.

Psittacula surda, Steph. Gen. Zool. xiv. p. 141 (1826); Wagl. Mon. Psitt. p. 620 (1832); Hartl. Syst. Verz. Ges. Mus. p. 88 (1844); G. R. Gr. Gen. B. ii. p. 423, n. 7 (1846); Burm. Syst. Ueb. ii.

p. 195 (1856); G. R. Gr. List Psitt. Brit. Mus. p. 88 (1859); Schleg. Mus. P.-B. Psittaci, p. 70 (1864); Finsch, Papag. ii. p. 672 (1868); Pelz. Orn. Bras. pp. 268, 448 (1871); Schleg. op. cit. Revue, p. 31 (1874); Gieb. Thes. Orn. iii. p. 330 (1877).

Pyrrhulopsis surdus, Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 129; Souancé, Rev. et Mag. de Zool. 1856, p. 156; Sousa, Mus. Nac. 134, Billettin 12 (1962)

Lisb. Psittaci, p. 13 (1869).
Urochroma surda, Bp. Naumannia, 1856, Consp. Psitt. n. 126;
Souancé, Icon. Perr. pl. xxxviii. (1857); Sclat. Cat. Am. B.
p. 356, n. 2132 (1862); G. R. Gr. Hand-list, ii. p. 167, n. 8364
(1870); Sclat. § Salv. Nomencl. Av. Neotrop. p. 114, n. 2 (1873);
Salv. Cat. B. Strickl. Coll. p. 469 (1882).

Eucinetus surdus, Rchnw. Vogelbild. t. xxiv. f. 1 (1878-83).

Euchroura surda, Rehnw. Journ. f. Orn. 1881, p. 359 (Consp. Psitt. p. 199).

Adult male. Green, paler below; forehead, lores, periophthalmic region, and anterior part of the cheeks ochraceous yellow; an olive tinge on the hind neck, and a very slight bluish one on the rump; scapulars olive-brown; sides of the body yellowish green; bastardwing and primary-coverts blackish brown, with narrow bluish-green edges on the outer webs; quills blackish brown, with the outer webs edged with green; metacarpal edge bluish green; under wing-coverts light green, like the under surface of the body; greater under wing-coverts and inner webs of the quills below dull greenish; two central tail-feathers green, tipped with black, the lateral ones golden ochre, not yellow, edged with black at the tip, and with dusky green on the outer webs: bill yellowish, with the base lead-colour; feet dusky; iris grey. Total length about 6·36 inches, wing 4·8, tail 2, bill 0·65, tarsus 0·4.

Female. Like the male, but the two central tail-feathers uniform green, with no black tips, and the remainder with green edges at the tip.

Hab. South-eastern Brazil.

a. Ad. st. S. America. Baron Laugier Coll. b. Ad. sk. S. America. Gould Coll. S. America. Purchased. c, d. Ad. sk. e. Ad. sk. Sclater Coll. Brazil. f, g. Ad. sk. Balia, Brazil (Wucherer). Salvin-Godman Coll. h. Ad. sk. Novo Fribourgo, Prov. of Rio Salvin-Godman Coll. Janeiro (J. Youds). i. Ad. sk. Prov. Rio Claro, Goyaz Salvin-Godman Coll. (Joyner).

#### 5. Urochroma hueti.

Psittacus huetii, Temm. Pl. Col. 491 (1830); Less. Compl. de Buff.,

Ois. ix. (1837), 2nd ed. p. 698 (1838).
Psittacula hueti, Wayl. Mon. Psitt. p. 619 (1832); Bourj. Perr. pl. 93 (1837-38); G. R. Gr. Gen. B. ii. p. 423, n. 4 (1846); id. List Psitt. Brit. Mus. p. 88 (1852); Schley. Mus. P.-B. Psittaci, p. 69 (1860); Léot. Ois. de l'île de la Trimidad, p. 332 (1866); Finsch, Papay. ii. p. 684 (1868); id. P. Z. S. 1870, p. 586;

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Pelz. Orn. Bras. p. 268 (note) (1871); Schleg. Mus. P.-B. Psittaci, Revue, p. 30 (1874); Gieb. Thes. Orn. iii. p. 328 (1877).

Pyrrhulopsis hueti, Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 125; Souance, Rev. et Mag. de Zool. 1856, p. 156; Sousa, Mus. Nac.

Lisb. Psittaci, p. 13 (1869).

Urochroma hueti, Bp. Naumannia, 1856, Consp. Psitt. n. 124; Sclat. P. Z. S. 1857, p. 19; Sclat. § Salv. P. Z. S. 1867, pp. 753, 759; G. R. Gr. Hand-list, ii. p. 167, n. 8361 (1870); Sclat. § Salv. P. Z. S. 1873, p. 301; iid. Nomencl. Av. Neotrop. p. 115, n. 6 (1873); Salv. Cat. B. Strickl. Coll. p. 469 (1882); Tacz. Orn. Pér. iii. p. 217 (1886).

Euchroura hueti, Rchnw. Journ. f. Orn. 1881, p. 360 (Consp. Psitt.

p. 200); id. Vogelbild. Nachtr. 115 (1883).

Adult male. Green, underparts paler and yellower; forehead and lores deep blue, nearly black; anterior part of the cheeks bright blue; crown and hind neek with a slight olive tinge; sides of the body yellow-green; under tail-coverts yellow-green, with the inner webs greener, sometimes the longest entirely yellow; thighs bluish; bend of the wing, under wing-eoverts, and axillaries scarlet; outermost upper wing-coverts deep blue, the greater ones green at the base, blue at the tip, the blue portion diminishing on the inner ones; bastard-wing and primary-coverts black, edged with blue on the outer webs; primaries black, edged with green on the outer webs; outermost secondaries on the outer webs blue towards the base, green towards the tip, the innermost ones with the outer webs entirely green; greater under wing-coverts and inner webs of the quills below dull green; two central tail-feathers entirely green, the lateral ones purple-red with a black band near the tip, which is green: bill yellowish; feet greyish brown. length about 6.8 inches, wing 4.6, tail 1.7, bill 0.62, tarsus 0.4.

Female. Like the male, only the tail has no red colour, and it is almost wholly green, with the inner webs of the lateral tail-feathers yellowish green; there is a black band, more or less distinct, near

the tip of all the tail-feathers.

Young. The blue colour on the forehead and lores is wanting. Hab. Trinidad, Venezuela, Guiana, Cayenne (?), E. Eeuador, and E. Peru.

a. Ad. st.	Cayenne (?).	Baron Laugier Coll.
b. Ad. st.	British Guiana (?).	R. Schomburgk [C.].
c. Ad. sk.	` '	Gould Coll.
d. Ad. sk.	Trinidad.	Salvin-Godman Coll.
e, f. Ad. sk.	Sarayacu, Ecuador (C. Buckley).	Salvin-Godman Coll.
g. Ad. sk.	Xeberos (Bartlett).	Sclater Coll.
h. Ad. sk.	Chamicuros, Upper Amazons.	Gould Coll.

#### 6. Urochroma dilectissima.

Urochroma dilectissima, Sclat. & Salv. P. Z. S. 1870, p. 788, pl. xlvii.; iid. Nomencl. Av. Neotrop. p. 115, n. 7 (1873); Gieb. Thes. Orn. iii. p. 742 (1877).

Euchroura dilectissima, Rchnw. Journ. f. Orn. 1881, p. 361 (Consp.

Psitt. p. 201); id. Vogelbild. Nachtr. 116 (1883).

Adult male. Green, the underparts lighter and more yellowish; forchead blue, crown glaucous; a small spot on the middle of the frontal edge, between the nostrils, lores, and a streak under the eyes scarlet; anterior and lower part of the cheeks and chin yellow; eubital edge black; bend of the wing, upper and under wing-coverts, bastard-wing, and innermost primary-coverts scarlet; outermost primary-coverts black; quills black, edged with green on the outer webs; innermost under wing-coverts yellow; the outermost greater ones, and inner webs of the quills below, dull green; tail-feathers yellow, on the outer webs edged with green, all, except the two outer ones, tipped with black, the black tip increasing towards the central feathers, which have a green portion between the yellow base and the black tips: bill yellowish at the tip, lead-colour at the base; feet dark lead-colour: "iris pale yellow-brown" (Goering). Total length 6.6 inches, wing 4.5, tail 1.8, bill 0.7, tarsus 0.45.

Female. Differs from the male in having very little red on the bend of the wing; the bastard-wing black, like the primary-coverts, and the outer wing-coverts green like the inner ones: "iris pale

brown " (Goering).

Hab. Venezuela.

a. ♂ ad. sk. South of Merida, Venezuela (H. Goering). Sclater Coll.
 b. ♀ ad. sk. Esquuque, Trujillo, Venezuela (H. Goering). Sclater Coll.

## 7. Urochroma stictoptera.

Urochroma stictoptera, Sclat. P. Z. S. 1862, p. 112, pl. xi.; id. Cat.
Am. B. p. 357, n. 2133 (1862); G. R. Gr. Hand-list, ii. p. 167,
n. 8365 (1870); Sclat. & Salv. Nomencl. Av. Neotrop. p. 114,
n. 1 (1873).

Psittacula stictoptera, Finsch, Papag. ii. 2, p. 671 (1868); Gieb.

Thes. Orn. iii. p. 330 (1877).

Euchroura stictoptera, Rchnw. Journ. f. Orn. 1881, p. 358 (Consp. Psitt. p. 198); id. Vogelbild. Nachtr. 113 (1883).

Adult. Green; wings brown; two of the outermost greater upper wing-coverts orange, the remaining upper wing-coverts brown with light tips; bastard-wing, primary-coverts, and quills edged with green on the outer webs; greater under wing-coverts and inner webs of the quills below dull green; tail green, the inner webs of the lateral tail-feathers towards the base above reddish brown, below golden yellow-brown: bill pale; feet dusky. Total length about 6.8 inches, wing 5.1, tail 2.1, bill 0.7, tarsus 0.45.

Hab. Bogota.

a. Ad. sk. (Bogota make.) Sclater Coll. (Type of species.)

# 8. Urochroma emmæ.

Urochroma emmæ, Berl. Journ. f. Orn. 1889, p. 202 (Colombia) (descr. nulla).

(Type.) Green, the underparts lighter, with a yellowish tinge:

upper wing-coverts green, black in the middle; primary-coverts black along the middle, and edged with green on both webs; quills blackish, edged with green on the outer webs; smaller under wing-coverts uniform with the underparts; the greater under wing-coverts and inner webs of the quills below verditer-green; tail green, with the inner webs of the lateral tail-feathers brown-orange, tinged with yellow; tail below brown yellowish green: bill lead-colour; feet dusky. Total length about 7 inches, wing 5.5, tail 2.35, bill 0.75, tarsus 0.45. (Mus. Berlepsch.)

Hab. Bogota.

## 25. CAICA \*.

Range. Guiana and Amazon Valley.

### Key to the Species.

a. Pileum black.
a'. Thighs and flanks yellow, more or less orange. melanocephala, p. 358.
b'. Thighs and flanks lemon-yellow pallida, p. 360.
b. Pileum like the nape rufous-orange.
a'. Thighs and flanks green leucogaster, p. 360.
b'. Thighs and flanks lemon-yellow xanthomera, p. 361.

# 1. Caica melanocephala.

The White-breasted Parrot, Edw. Birds, iv. pl. 169 (1751); Lath. Gen. Syn. i. p. 305 (1781); id. Gen. Hist. ii. p. 256, with var. A (1822).

Psittaeus Mexicanus pectore albo, Briss. Orn. iv. p. 298 (1760).

Psittaeus melanocephalus, Linn. S. N. i. p. 149, n. 41 (1766); Gm. S. N. i. p. 346, n. 41 (1788); Lath. Ind. Orn. i. p. 128, n. 136 (1790); Shaw, Gen. Zool. viii. 2, p. 542 (1811); Bechst. Kurze Ueb. p. 102 (1811-12); Vieill. N. D. xxv. p. 366 (1817); Kuhl, Consp. Psitt. p. 70 (1820); Hahn, Vöy. aus As. Afr. etc. Liet. ii. t. i. (1822); Vieill. Enc. Méth. iii. p. 1399 (1823); Spix, Av. Bras. i. p. 46 (1824); Steph. Gen. Zool. xiv. p. 101 (1826); Voigt, Cuv. Uebers. p. 739 (1831); Less. Tr. d'Orn. p. 199 (1831); G. R. Gr.

<sup>\*</sup> The generic name Caica, commonly attributed to Lesson, was not used by him; he only made use of the French name Les Caicas for a group (or race, as he calls it) of Parrots (Tr. d'Orn. p. 198, 1831), and Psittacus pilcatus, Gm., was looked upon as the type by him (Compl. de Buff. ix. p. 212, 1837); later on Lesson (Rev. Zool. 1842, p. 135; Descr. Mamm. et Ois. p. 197, 1847) incidentally used the name Caica as a subgenus, while he was describing Psittacus (Caica) chrysopogon, which is a Brotogcrys. Bonaparte was the first to use the generic name Caica; he regarded P. mclanocephalus, Linn., as the type, but he included in it also P. pilcatus, Gm. Although the name Caica evidently refers to P. caica, Lath. (=pilcatus, Gm.), which belongs to another genus, I do not think we should be justified in not using it here.

Gen. B. ii. p. 421, n. 15 (partim.) (1846); Cab. in Schomb. Guiana. iii. p. 723 (1848); G. R. Gr. List Psitt. Brit. Mus. p. 73 (1859); Pelz. Verh. z.-b. Ges. Wien, 1865, pp. 923 (part.), 924; Gulliv. P. Z. S. 1875, p. 489.

La Petite Perruche Maypouri de Cayenne, D'Aubent. Pl. Enl. 527.

Le Maypouri, Buff. Hist. Nat. Ois. vi. p. 250 (1779).

Psittacus atricapillus, J. F. Miller, Cim. Phys. t. 4 (1796).

Le Perroquet Maïpouri, Levaill. Perr. pls. 119 (ad.), 120 (var.)

Pionus melanocephalus, part., Wagl. Mon. Psitt. p. 608 (excl. av. horn.) (1832); Burm. Syst. Ueb. ii. p. 193 (note) (syn. emend.) (1856).

Psittacus badiceps, Guér. (nec Lear) Icon. Règn. An. Cuv., Ois. p. 24, pl. 36 bis. f. 2 (1829-38); Brehm, Mon. d. Papag. t. 64.

Poicephalus melanocephalus, Sw. Class. B. ii. p. 301 (1837). Caica melanocephalus, Bp. Consp. Av. p. 5 (syn. emend.) (1850);

Salv. Ibis, 1886, p. 69.

Caica melanocephala, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 108; Souancé, Rev. et Mag. de Zool. 1856, p. 154; Bp. Naumannia, 1856, Consp. Psitt. n. 107; Sclat. P. Z. S. 1857, p. 19; id. Cat. Am. B. p. 355, n. 2124 (1862); Sclat. & Salv. P. Z. S. 1867, Am. B. p. 595, fl. 2124 (1802); Scall. S Sale. I. Z. S. 1804) p. 588; Sousa, Mus. Nac. Lisb. Psitt. p. 12 (1869); G. R. Gr. Hand-list, ii. p. 161, n. 8290 (1870); Garrod, P. Z. S. 1873, pp. 446, 633; Sclat. & Salv. Nomencl. Av. Neotrop. p. 114, n. 7 (1873); Garrod, P. Z. S. 1874, p. 587; Rehnw. Vogelbild. t. x. f. 2 (1878-83); Salv. Cat. B. Strickl. Coll. p. 468 (1882); Sclat. List.

Vert. An. 8th ed. p. 35 (1883); W. L. Sclut. Ibis, 1887, p. 317.
 Amazona melanocephala, Schleg. Mus. P.-B. Psittaci, p. 64 (1864);

id. op. cit. Revue, p. 29 (1874).

Pionias melanocephalus, Finsch, Papag. ii. p. 432 (1868); Pelz. Orn. Bras. pp. 262, 447, liii (1871); id. Ibis, 1873, p. 117; Gieb. Thes. Orn. iii. p. 191 (1877).

Pœocephalus melanocephalus, Rchnw. Journ. f. Orn. 1881, p. 382

(Consp. Psitt. p. 222).

Pionites melanocephalus, Heine & Rchnw. Nomencl. Mus. Hein. Orn. p. 231 (1890).

Adult. Back, wings, and tail green; pileum black; cheeks and throat yellow; lores and a streak under the eyes green; a collar round the hind neck, bordered above and below with some bluish feathers, orange-rufous; breast and abdomen white cream-colour; sides of the breast, axillaries, flanks, and thighs orange-yellow; under tail-coverts yellower; primary-coverts and primaries black, with the outer webs deep blue, edged with green; carpal edge partly yellow; greater under wing-coverts and quills below black; tail-feathers edged with yellow at the tip, underneath brown with golden reflexions: bill horn-black; feet and naked skin round the eyes black; iris with an inner ring brown and an outer one red. Total length about 9.3 inches, wing 5.5, tail 2.8, bill 1, tarsus 0.5.

Female. Like the male.

Young. Feathers of the pileum brown with green edges

(Wagler).

Hab. Guiana and Upper Amazons as far as Rio Negro, and perhaps also Bogota (Sclater).

a. Ad. sk. Sclater Coll. S. America. b. Ad. sk. S. America. Purchased. Salvin-Godman Coll. c, d. ♂ 2 ad. sk. Bartica Grove, British Guiana, Jan., August (II. Whitely). e. J ad. sk. Camacusa, British Guiana, June Salvin-Godman Coll. (*H. Whitely*). Marabitanas, Brazil, March Salvin-Godman Coll. f. ♀ ad. sk. (Natterer). g. Ad. sk. Rio Negro (Wallace). Sclater Coll. Amazons (Wallace). Salvin-Godman Coll. h, i. Ad. sk.

## 2. Caica pallida.

Psittacus melanocephalus (part.), G. R. Gr. List Psitt. Brit. Mus.

p. 73, spec. b (1859).
Caica melanocephala, Sclat. (nec Linn.) P. Z. S. 1858, p. 76
(Rio Napo)?; Sclat. & Salv. P. Z. S. 1867, p. 753 (Yurimaguas, Chyavetas), 1873, p. 301 (Chamicuros); iid. Nomencl. Av. Neotrop.
p. 114, n. 7 (part.) (1873); Tacz. P. Z. S. 1882, p. 46; Tacz. & Berl. P. Z. S. 1885, p. 109 (Canelos, Ecuador?); Tacz. Orn. Pér. iii. p. 226, Tabl. p. 100 (1886); Garl. Journ. f. Orn. 1889, p. 291; Berl. Journ. f. Orn. 1889, p. 317.

Amazona melanocephala, Schleg. Mus. P.-B. Psittaci, p. 64, spec. 2, 3

(1864).

Pionias melanocephalus (part.), Finsch, Papag. ii. p. 432 (1868). Perocephalus melanocephalus (part.), Rehnw. Journ. f. Orn. 1881, p. 382 (Consp. Psitt. p. 222).

Caica melanocephala pallida, Berl. Journ. f. Orn. 1889, p. 317.

Similar to C. melanocephala, but with the thighs, flanks, and also the under tail-coverts paler, lemon-yellow, with no orange tinge.

Hab. E. Peru and E. Ecuador.

As the differences pointed out by Graf von Berlepsch as distinctive of the birds from E. Peru and E. Ecuador seem constant, I have been induced to regard them as belonging to a distinct species.

a. ♀ ad, sk. Chamicuros, Upper Amazons, Gould Coll. November (Hauxwell). b. Ad. sk. Sarayacu, Ecuador (Buckley). Sclater Coll.

### 3. Caica leucogaster.

Psittacus leucogaster, Ill. in Mus. Berol.; Kuhl, Consp. Psitt. p. 70 (1820); Steph. Gen. Zool. xiv. p. 101 (1826); Less. Tr. d'Orn. p. 199 (1831); Bourj. Perr. pl. 58 (1837–38); G. R. Gr. List Psitt. Brit. Mus. p. 73 (1859); Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xv (1863); Pelz. Verh. z.-b. Ges. Wien, 1865, p. 925.

Pionus melanocephalus, part., Wagl. Mon. Psitt. p. 608 (av. hornot.)

(1832).

Psittacus badiceps, Lear, Parr. pl. 1 (1832); G. R. Gr. Gen. B. ii. p. 421, n. 16 (1846); Gulliv. P. Z. S. 1875, p. 489.

Psittacus melanocephalus, part., G. R. Gr. Gen. B. ii. p. 421, n. 15

Caica melanocephalus, part., Bp. Consp. Av. i. p. 5 (1850).

Caica leucogaster, Bp. Rev. et Mag. de Zool. 1854, p. 151, n. 110; Souancé, Rev. et Mag. de Zool. 1856, p. 154; Bp. Naumannia,

1856, Consp. Psitt. n. 108; Sclat. P. Z. S. 1857, p. 266; Sousa, Mus. Nac. Lisb. Psittaci, p. 12 (1869); G. R. Gr. Hand-list, ii. p. 161, n. 8291 (1870); Sclat. & Salv. Nomencl. Av. Neotrop. p. 114, n. 8 (1873); Sclat. P. Z. S. 1880, p. 715; Rehm. Uogelbild. t. x, f. 1 (1878-83); Sclat. List Vert. An. 8th ed. p. 351 (1883).

Pionus melanocephalus, part., Burm. Syst. Ueb. ii. p. 193 (note) (1856).

Psittacus badius, Schleg. Dierent. p. 66 (1864).

Amazona leucogaster, Schleg. Mus. P.-B. Psittaci, p. 63 (1864); id. op. cit. Revue, p. 29 (1874).

Psittacus melanocephalus, var., Pelz. Verh. z.-b. Ges. Wien, 1865,

pp. 924, 925.

Pionias leucogaster, Finsch, Papag. ii. p. 435 (1868); Pelz. Orn. Bras. pp. 264, 447, liii (1871); Gieb. Thes. Orn. iii. p. 191 (1877). Pœocephalus leucogaster, Rchnw. Journ. f. Orn. 1881, p. 382 (Consp. Psit $\tilde{t}$ . p. 222).

Pionites leucogaster, Heine & Rchnw. Nomencl. Mus. Hein. Orn.

p. 231 (1890).

Adult. Back, wings, and tail green; pileum, hind neck, and upper ear-coverts orange-rufous; lores, sides of the head, and throat yellow; breast and abdomen white cream-colour; axillaries orangerufous; flanks and thighs green; under tail-coverts yellow; wings as in C. melanocephala; tail underneath dusky golden: bill white: naked skin round the eyes reddish flesh-colour; feet pale brown; iris reddish brown. Total length about 9.5 inches, wing 5.5, tail 2.7. bill 1.03, tarsus 0.55.

Hab. Lower Amazons.

α, b. Ad. st. S. America. c. Ad. sk. Para (Natterer). d. 3 ad. sk. Lower Amazons. Zool. Society's Coll. Sclater Coll. Zool. Society's Coll.

#### 4. Caica xanthomera.

Caica xanthomeria, G. R. Gr. in Mus. Brit.; Sclat. P. Z. S. 1857, p. 266; G. R. Gr. Hand-list, ii. p. 161, n. 8292 (1870).

Psittacus xanthomerius, G. R. Gr. List Psitt. Brit. Mus. p. 73 (1859).

Psittacus melanocephalus, var., Pelz. Verh. z.-b. Ges. Wien, 1865, pp. 923, 924.

Psittacus xanthocercus, Natt. MS., teste Pelz. l. c.

Pionias xanthomerus, Finsch, Papag. ii. p. 438 (1868); Pelz. Orn. Bras. pp. 263, 447, liii (1871); Gieb. Thes. Orn. iii. p. 193 (1877). Caica xanthomeros, Selut. § Salv. P. Z. S. 1873, p. 301; Taez. Orn.

Pér. iii. p. 226, Tabl. p. 100 (1886).

Caica xanthomera, Sclat. & Salv. Nomencl. Av. Neotrop. p. 114, n. 9 (1873); Sclat. P. Z. S. 1877, p. 419, 1879, p. 301, pl. xxviii. Rchnw. Vogelbild. t. x. f. 3 (1878-83); Sclut. List Vert. An. 8th ed. p. 351 (1883).

Pœocephalus xanthomerus, Rchnw. Journ. f. Orn. 1881, p. 382 (Consp. Psitt. p. 222).

Adult. Very much like C. leucogaster, from which it differs in having the thighs and flanks lemon-yellow instead of green.

Hab. Upper Amazons.

 $\alpha$ 

b

a. Ad. st.
b. Ad. sk.
c. Q ad. sk.
Rio Javarri.
H. W. Bates [C.]. \( (Types of H. W. Bates [C.]. \) \( (the species.) \( (the species.) \) \( (the species.) \( (the species.) \) \( (the species.) \( (the species.) \) \( (the species.) \( (the species.) \) \( (the species.) \( (the species.) \) \( (the species.) \( (the species.) \) \( (the species.) \( (the species.) \) \( (the species.) \( (the species.) \) \( (the species.) \( (the species.) \) \( (the species.) \( (the species.) \) \( (the species.) \) \( (the species.) \( (the species.) \) \( (the species.) \( (the species.) \) \( (the species.) \) \( (the species.) \( (the species.) \) \( (the

#### 26. PŒOCEPHALUS.

Poicephalus, Sw. Class. B. ii. p. 301 (1837) . . . . . Piocephalus, G. R. Gr. List Gen. B. p. 52 (1840). Peocephalus, Strickl. Ann. & Mag. N. H. vii. p. 34 (1841). Poiecephalus, Agass. Nomencl. Zool., Aves, p. 62 (1842–46). Poiocephalus, Agass. Nomencl. Zool., Aves, Add. p. 18 (1842–46). Peocephalus, Bp. Naumannia, 1856, Consp. Psitt. gen. 50. Pheocephalus, Hartl. Syst. Orn. W.-Afr. p. 167 (1857).

Range. Confined to Africa, south of the desert of Sahara.

## Key to the Species.

neg to the species.	
. General colour green.	
a'. Bend of the wing, metacarpal edge, thighs,	
and often the forehead, except in young birds, red or yellowish scarlet.	
a''. Neck brown, with an olive or grey tinge;	
larger, wing 8.8 to 8.5 inches.	
$a^{\prime\prime\prime}$ . Head and neck with an olive tinge	robustus, p. 363.
$b^{\prime\prime\prime}$ . Head and neck silvery grey	fuscicollis, p. 364.
b". Neck green; smaller, wing not more	
than 8 inches.	
c'''. Sinciput, bend of the wing, metacarpal edge, and thighs yellow-orange	gulielmi, p. 366.
d'''. Forehead, bend of the wing, metacarpal	* / /
edge, and thighs more or less red	jaubryanus, p. 367.
b'. Bend of the wing, metacarpal edge, and	massaicus, p. 367.
thighs with no red colour.	
c''. Breast and abdomen green.	c · '11 900
e'''. Under wing-coverts yellow	fuscicapillus, p. 368.
$f'''$ . Under wing-coverts green. $a^{1}$ . Head brown	crassus, p. 369.
$b^4$ . Head more or less yellow.	c/1100110, p. 000.
a <sup>5</sup> . Rump and upper tail-coverts grass-	
green	flavifrons, p. 369.
$b^5$ . Rump and upper tail-coverts bluish	, , , , , , , , , , , , , , , , , , , ,
green	citrinocapillus, p. 370.
d". Breast and abdomen yellow- or orange-	
red. $g'''$ . Breast and abdomen yellow	senegalus, p. 371.
h'''. Breast and abdomen orange-red	versteri, p. 372.
b. General colour brown.	7 1
c'. Bend of the wing brown like the upper	
parts; breast and abdomen pale vermilion	
in the male, brown, with the edges of	6
the feathers green, in the female	rufiventris, p. 372.

d'. Bend of the wing and under wing-coverts yellow.

e". Lower back, rump, and upper tailcoverts green ......

meyeri, p. 373.

f'. Lower back, rump, and upper tailcoverts brown, like the rest of the upper parts, in the male, blue in the female ....

rüppelli, p. 375.

## 1. Pœocephalus robustus.

Robust Parrot, Lath. Syn. i. p. 296 (1781); id. Gen. Hist. ii. p. 219

(1822).

Psittacus robustus, Gm. S. N. i. p. 344, n. 121 (1788); Lath. Ind. Orn. i. p. 112, n. 94 (1790); Bechst. Kurze Ueb. p. 91 (1811-12); Vieill. N. D. xxv. p. 314 (1817); Kuhl, Consp. Psitt. p. 101 (1820); Vieill. Enc. Méth. iii. p. 1367 (1823); G. R. Gr. List Psitt. Brit. Mus. p. 70 (1859); Schleg. Mus. P.-B. Psittaci, p. 33 (1864); Sharpe, Cat. Afr. B. p. 19 (partim) (1871); Schleg. Mus. P.-B. Psittaci, Revue, p. 9 (1874); Sharpe, Layard's B. S. Afr. p. 194 (1875–84); Holub u. Pelz. Beitr. Orn. Südafr. p. 160 (1882); ? Shelley, Ibis, 1882, p. 249; ? Tristr. Cat. Coll. B. p. 78 (1889).

Psittacus caffer, Licht. Cat. rer. rariss. Hamb. p. 6 (1793); Bechst.

Kurze Ueb. p. 100 (1811).

Le Perroquet à franges souci, Levaill. Perr. pl. 136 (ad.), 131 (var.) (1805).

Le Vaillant's Parrot, Lath. Syn. Suppl. ii. p. 95 (1802).

Psittacus levaillanti, Lath. Syn. Suppl. p. xxii (1802); Vieill. N. D. xxv. p. 312 (1817); Kuhl, Consp. Psitt. p. 83 (1820); Vieill. Enc. Méth. iii. p. 1366 (1823); Steph. Gen. Zool. xiv. p. 107 (1826); Voigt, Cuv. Uebers. p. 743 (1831); Hahn, Orn. Atl., Papag. p. 74, t. 55 (1836); G. R. Gr. Gen. B. ii. p. 421, n. 7 (1846); Licht. Nomenel. Av. p. 70 (1854); Layard, B. S. Afr. p. 230 (1867).

Psittacus infuscatus, Shaw, Gen. Zool. viii. 2, p. 523 (1811) (ex Le-

vaillant).

Psittacus flammipes, Bechst. Kurze Ueb. p. 100, pl. 18 (1811–12).

Amazona levaillanti, Less. Tr. d'Orn. p. 190 (1831). Pionus le vaillanti, Wayl. Mon. Psitt. p. 614 (1832); Selby, Nat. Libr., Parrots, p. 113 (1836); Hartl. Syst. Verz. Ges. Mus. p. 88 (1844). Psittacus flammiceps, "Bechst." (errore), G. R. Gr. Gen. B. ii. p. 421, in the syn. of P. levaillanti, n. 7 (1846).

Psittacus vaillanti, Bp. Compt. Rend. xxx. p. 137 (1850).

Pœocephalus vaillantii, Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 211.

Poiocephalus levaillanti, Hartl. Journ. f. Orn. 1854, p. 194; Bolle. Journ. f. Orn. 1856, p. 170.

Pœocephalus levaillantii, Souancé, Rev. et Mag. de Zool. 1856, p. 216; Sousa, Mus. Nac. Lisboa, Psittaci, p. 19 (1869).

Pæocephalus levaillantii, Bp. Naumannia, 1856, Consp. Psitt. n. 212.

Phæocephalus levaillanti, Kirk, Ibis, 1864, p. 329.

Pionias robustus, Finsch, Papag. ii. p. 475 (1868); Gieb. Thes. Orn. iii. p. 192 (1877); Bocage, Orn. d'Ang. p. 71 (1881).

Poicephalus robustus, G. R. Gr. Hand-list, ii. p. 161, n. 8282 (1870).

Perocephalus robustus, Gurn. Ibis, 1873, p. 255 (Natal); Rehnw. Vogelbild, t. vii. f. 2 (1878-83): id. Journ, f. Orn. 1881, p. 383 (Consp. Psitt. p. 223); Salv. Cat. B. Strickl. Coll. p. 403 (1882); Sclat. List Vert. An. 8th ed. p. 337 (1883).

Adult male. Head and neck olive, with the centre of the feathers brown, the lower part of the cheeks and chin browner; forehead sometimes red; lores black; interscapular region, scapulars, and wing-coverts black, each feather marked with green on the edge; lower back, rump, breast, abdomen, upper and under tail-coverts bright grass-green; thighs, bend of the wings, and metacarpal edge vermilion; quills and tail-feathers dark brown: bill whitish horn-colour; feet black. Total length about 13 inches, wing 8.5, tail 3.7, bill 1.5, tarsus 0.75.

Female. Like the male.

Young. Wants the red colour on the bend of the wings and on the thighs (Finsch).

Hab. South Africa, up to Zambesi on the east, and up to Angola

on the west.

a. Ad. sk.S. Africa.b. Ad. sk.S. Africa.c, d.  $\mathcal{O}$  ad. sk.Elands Post (7e, f, g.  $\mathcal{O}$  ad. sk.Elands Post,h. Ad. sk.Kingwilliamstoi, k.  $\mathcal{O}$  ad. sk.Surg Mountaini. Ad. sk.Newcastle (Rei. Ad. sk.Angola.

S. Africa.
S. Africa.
Elands Post (T. C. Atmore).
Elands Post, June (T. C. Atmore).
Kingwilliamstown.
Burg Mountain, April (Gordge).
Newcastle (Reid).
Angola.

Purchased. J. Roche, Esq. [P.]. Shelley Coll. Sharpe Coll.

Lieut. Anstey [P.]. Shelley Coll. Shelley Coll. Tweeddale Coll.

# 2. Pœocephalus fuscicollis.

Psittacus fuscicollis, Kuhl, Consp. Psitt. p. 93 (1820); Schleg. Mus. P.-B. Psittaci, p. 34 (1864); id. op. cit. Revue, p. 9 (1874); Sharpe,

Layard's B. of S. Afr. p. 195 (1875-84).

Psittaeus pachyrhynchus, Hartl. Syst. Verz. Ges. Mus. p. 88 (1844); id. Abh. aus d. Geb. d. Natury. Hamb. p. 47 (1852); Hartl. Syst. Orn. W.-Afr. p. 167 (1857); Cass. Pr. Acad. Nat. Sc. Philad. 1859, p. 140; Hartl. Journ. f. Orn. 1861, p. 262; G. R. Gr. List Psitt. Brit. Mus. p. 69 (1859); Owen, Ibis, 1866, p. 171.

Psitt. Brit. Mus. p. 69 (1859); Owen, Ibis, 1866, p. 171.
Psittacus levaillanti, part., G. R. Gr. Gen. B. ii. p. 421, n. 7 (1846).
Poiocephalus magnirostris, Bp. Consp. Av. i. p. 5 (1850); id. Compt.
Rend. xxx. p. 137 (1850); Hartl. Journ. f. Orn. 1854, p. 257.

Poiocephalus pachyrhynchus, *Hartl. Journ. f. Orn.* 1854, p. 194. Pœocephalus pachyrhynchus, *Bp. Rev. et Mag. de Zool.* 1854, p. 154, n. 210.

Pœocephalus magnirostris, Souancé, Rev. et Mag. de Zool. 1856, p. 216.

Paeocephalus magnirostris, Bp. Naumannia, 1856, Consp. Psitt. n. 211.

Phæocephalus pachyrhynchus, Heine, Journ. f. Orn. 1860, p. 190. Pionias fuscicollis, Finsch, Papag. ii. p. 473 (1868); Bocage, Jorn. Sc. Lisb. uo. xvii. p. 41 (1874); Gieb. Thes. Orn. iii. p. 190 (1877); Rehnw. Journ. f. Orn. 1877, p. 30; Bocage, Orn. d'Ang. p. 70 (1881); Böhm, Journ. f. Orn. 1882, p. 208 (Kakoma, Central Africa). Poicephalus fuscicollis, G. R. Gr. Hand-list, ii. p. 161, n. 8281 (1870).

Psittacus robustus, part., Sharpe, Cat. Afr. B. p. 19 (Damara-Land, Ondonga) (1871); Rchnw. (nec Gm.) Journ. f. Orn. 1877, pp. 14, 30 (Loango); Sharpe, in Oates's Matabele-Land, App. p. 306 (1881).

Poicephalus robustus, Anders. & Gurn. (nec Gm.) B. Damara-Land,

p. 213 (1872).

Pœocephalus fuscicollis, Bocage, Jorn. Sc. Lisb. no. xvi. p. 285 (1873);
Rchnw. Vogelbild. in the text of pl. vii. f. 6 (1878-83);
id. Journ. f. Orn. 1881, p. 383 (Consp. Psitt. p. 223);
Sclat. List Vert. An. 8th ed. p. 337 (1883);
Rchnw. Journ. f. Orn. 1891, p. 145 (Mssua, E. Afr.).

? Pionias robustus, Böhm (nec Gm.), Journ. f. Orn. 1886, pp. 414 (Lufuku), 421 (Lualaba); Matschie, Journ. f. Orn. 1887, p. 149; Schalow, Journ. f. Orn. 1887, p. 231 (N. von Tanganjika, Uniamuesi,

Luapula, Likulwe).

Adult male. Head and neck silvery grey, with the feathers brown in the middle; lower part of the cheeks and chin browner; forehead, and sometimes even the vertex, rose-red; lores blackish; upper breast greenish grey; interscapular region, scapulars, and wing-coverts greenish brown, each feather greener on the edges; lower back, rump, breast, abdomen, upper and under tail-coverts bright grass-green; thighs, bend of the wing, and metacarpal edge vermilion; quills and tail-feathers dark brown: "bill whitish; feet lead-colour; iris maroon" (Anchieta). Total length about 13 inches, wing 8.5, tail 3.7, bill 1.7 to 1.5, tarsus 0.75.

Young. Wants the red feathers on the bend of the wing and along the metacarpal edge; the thighs have some feathers green and some red, but most likely in very young birds they are entirely

green.

Hab. Western South Africa, fron Gaboon to Angola, Damara-

Land, and across Africa to the Zambesi region.

This species differs from *P. robustus* principally in the silvery-grey tinge of the head and neck; besides, the upper mandible has a much longer and thinner hook.

α. Ad. st. [var.].		Zool, Society's Coll.
b. Ad. sk.	W. Africa.	Zool. Society's Coll.
c. Ad. st.	W. Africa.	Massena Coll.
d, $e$ . Imm. sk.	Africa.	J. Turner, Esq. [C.].
$f, \ \ \supseteq \ \mathrm{imm.\ sk.}$	Humbe, Dec. (Anchieta).	Shelley Coll.
g. d ad. sk.	Ondonga, Damara-Land, Jan. (Andersson).	Sharpe Coll.
h. Ad. sk.	Sishongo, Damara-Land (Andersson).	Sharpe Coll.
i. Ad. sk.	Zambesi (Bradshaw).	Shelley Coll.
k. Ak. sk.		W. & C. G. Oates, Esqrs. [P.].

## 3. Pœocephalus gulielmi.

Pionus gulielmi, Jard. Contr. to Orn. 1849, p. 64, pl. 28 (Congo). Poiocephalus guilielmi, Hartl. Journ. f. Orn. 1854, p. 194; Bolle,

Journ. f. Orn. 1856, p. 170. Pœocephalus gulielmi, Bp. Rev. et May. de Zool. 1854, p. 154, n. 216; Souancé, Rev. et Mag. de Zool. 1856, p. 216; Rchnw. Vogelbild. t. vii. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 384 (Consp. Psitt. p. 224); Sclat. List Vert. An. 8th ed. p. 337 (1883).

Pæocephalus gulielmi, Bp: Naumannia, 1856, Consp. Psitt. n. 214. Psittacus guilielmi, Hartl. Syst. Orn. W.-Afr. p. 167 (1857).

 Psittaeus gulielmi, G. R. Gr. List Psitt. Brit. Mus. p. 70 (1859);
 Hartl. Journ. f. Orn. 1861, p. 262; Schleg. Mus. P.-B. Psittaci,
 p. 34 (1864) (Côte d'Or); Sharpe, Cat. Afr. B. p. 19 (part.) (1871).

Pionias gulielmi, Finsch, Papag. ii. p. 480 (1868).

Phæocephalus gulielmi, Sharpe, Ibis, 1870, p. 486 (Fantee).

Poicephalus gulielmi (part.), G. R. Gr. Hand-list, ii. p. 161, n. 8283 (1870).

Psittacus gulielmi, Schleg. Dierent. p. 65 (1864); id. Mus. P.-B. Psittaci, Revue, p. 9 (1874).

Pionias guilelmi, Gieb. Thes. Orn. iii. p. 190 (1877).

Adult. Green; sinciput, bend of the wing, metacarpal edge, and thighs "yellowish scarlet" (Jardine) or yellow-orange; lores black; interscapular region, scapulars, upper and under wing-coverts black, broadly edged with green; lower back, rump, upper tailcoverts, and lower parts bright green, with the bases of the feathers blackish; quills blackish, the primaries narrowly edged with olive on the outer web, the secondaries more or less edged with green; tail black: "the tip of the maxilla and the whole of the mandible greenish black; the base of the maxilla, cere, and bare space round the eye flesh-colour; tarsi and feet greyish black" (Jardine); "iris light brown" (Zool. Soc. specim.). Total length about 11 inches, wing 7.4, tail 3.2, bill 1.3, tarsus 0.62.

Adult female. Like the male, only a little smaller.

Young. No yellow-orange patches on the sinciput, on the bend of the wing, nor along the metacarpal edge, which are green; thighs also green; some of the under wing-coverts and axillaries are mingled with red.

Hab. Western Africa from the Gold Coast to the Congo.

a. Ad. sk. [var.].	Congo.	Zool. Society's Coll.
b. Ad. sk.	Congo.	Shelley Coll.
c. Ad. sk.	Gold Coast (Aubim).	Shelley Coll.
d. Ad. sk.	Fantee (Ussher).	Sharpe Coll.
e. Juv. sk.	Fantee (Aubim).	Sharpe Coll.
f. Ad. sk.	Fantee.	Purchased.
g, h. Ad. et juv.	W. Africa.	Massena Coll.
sk.		
<i>i, k.</i> ♂♀ ad. sk.	W. Africa.	Zool. Society's Coll.

## 4. Pœocephalus aubryanus.

Pœocephalus aubryanus, Souancé, Rev. et Mag. de Zool. 1856, p. 216 (Gabon).

Psittacus lecomtei, Verr. Mus. Paris; Hartl. Syst. Orn. W.-Afr. p. 167 (1857) (Gabon).

Psittacus aubryanus, G. R. Gr. List Psitt. Brit. Mus. p. 71 (1859).
Pionias guglielmi (part.), Finsch, Papag. ii. p. 480 (1868); Bocage (nec Jard.), Orn. d'Ang. p. 69 (1881).

Pœocephalus guglielmi, Bocage (nec Jard.), Jorn. Sc. Lisb. no. 11, 1868, p. 142; Sousa, Mus. Nac. Lisb. Psittaci, p. 20 (1869); Bocage,

Jorn. Sc. Lisb. no. viii. 1870, p. 348.

Poicephalus gulielmi (part.), G. R. Gr. Hand-list, ii. p. 161, n. 8283 (1870).

Psittacus guglielmi (part.), Sharpe, Cat. Afr. B. p. 19, specim. d. (1871) (Angola).

Very much like *P. gulielmi*, but the red colour of the forehead, bend of the wing, metaearpal edge, and thighs with no yellowish tinge: upper mandible white, or black with a yellowish patch near the base: lower mandible black; feet dusky. Total length 11.5 inches, wing 7.7, tail 3.2, bill 1.35, tarsus 0.7.

Young. Has less red on the forehead, bend of the wings, and

metacarpal edge; thighs green.

Hab. Gaboon, Congo, and Angola.

a, b.  $\circlearrowleft$  Q ad. sk.W. Africa.Zool. Society's Coll.c. Ad. sk.Angola (Anchieta).Sharpe Coll.d. Ad. sk.Congo.Shelley Coll.e. Ad. sk.Angola.Monteiro Coll.

# 5. Pœocephalus massaicus.

Pœocephalus massaicus, Fischer u. Rchnw. Journ. f. Orn. 1884, p. 179 (Gross-Aruscha am Märuberg); Fischer, Zeitschr. f. ges. Orn. 1884, p. 372; id. Journ. f. Orn. 1885, p. 122; Rchnw. Journ. f. Orn. 1887, pp. 43, 55.

Very much like *P. aubryanus*, from which it differs very little; the red colour on the forehead seems less extended, and the black on the feathers of the upper parts not so sharply defined from the green edges; the bill is decidedly smaller: "iris orange; naked skin round the eyes and cere yellowish grey; maxilla horn-whitish, the tip and the mandible dark" (*Fischer*). Total length about 11 inches, wing 8, tail 3.5, bill 1.2, tarsus 0.7.

Female (adult?). Wants the red on the forehead, or has scarcely

a trace of it.

Hab. Massai-Land.

I have seen three specimens of this species lately sent to England by Mr. Jackson.

## 6. Pœocephalus fuscicapillus.

Pionus fuscicapillus, Verr. et Des Murs, Rev. et Mag. de Zool. 1849,
p. 58 (Zanzibar); Dubois, Bull. Mus. Roy. d' H. N. de Belg. iv.
p. 147 (1886) (Tanganyka).
Pœocephalus gulielmi, part., Bp. Rev. et Mag. de Zool. 1854, p. 154.

Pœocephalus gulielmi, part., Bp. Rev. et Mag. de Zool. 1854, p. 154. Poiocephalus cryptoxanthus, Peters, Monatsb. d. Berl. Acad. 1854, p. 371

Procephalus fuscicapillus, Bp. Naumannia, 1856, Consp. Psitt. n. 215. Poiocephalus hypoxanthus, Peters (errore?), Bp. L.c. in Syn. P. fuscicapilla.

Psittaeus hypoxanthus, G. R. Gr. List Psitt. Brit. Mus. p. 70 (1859). Pœocephalus fuscicapillus, Sclat. P. Z. S. 1864, p. 112 (Uzaramo); Cab., v. d. Decker's Reisen, iii. p. 40 (1869); Sharpe, P. Z. S. 1873, p. 711; Garrod, P. Z. S. 1874, p. 587; Nichols. P. Z. S. 1878, p. 358; Fischer, Journ. f. Orn. 1880, p. 188; Gurn. Ibis, 1881, p. 128; Shelley, P. Z. S. 1881, p. 592; Rchuw. Vogelbild. t. xx. f. 8 (1878-83); id. Journ. f. Orn. 1881, p. 385 (Consp. Psitt. p. 225); Sclat. List Vert. An. 8th ed. p. 337 (1883); Fischer, Zeitschr. f. ges. Orn. 1884, p. 372; id. Journ. f. Orn. 1885, p. 122; Rchuw. Journ. f. Orn. 1887, p. 55 (Usegua), 1891, p. 146.

Phæocephalus fuscicapillus, Kirk, Ibis, 1864, p. 329 (Zambesi).
 Psittacus fuscicapillus, Hartl. (nec Vieill.) P. Z. S. 1867, pp. 826, 828; Schley. Mus. P.-B. Psittaci, Revue, p. 9 (1874); Sharpe, Layurd's B. S. Afr. p. 197 (1875-84); Ayres, Ibis, 1887, p. 53;

Tristr. Cat. Coll. B. p. 78 (1889).

Pionias fuscicapillus, Finsch, Papag. ii. p. 492 (1868); Heugl. Peterm. Geogr. Mitth. 1869, p. 415; Finsch u. Hartl. Vög. O.-Afr. p. 499, t. vii. (1870); Heugl. Orn. N.O.-Afr. i. 2, p. 740 (1871); iil. op. cit. Nachtr. p. clvii (1871); Gieb. Thes. Orn. iii. p. 190 (1877); Cab. Journ. f. Orn. 1878, p. 241; Fisch. u. Rehnw. Journ. f. Orn. 1878, p. 251; Fischer, ibid. pp. 269, 286, 292, 1879, p. 303. Poicephalus cryptoxanthus, G. R. Gr. Hand-list, ii. p. 161, n. 8285 (1870).

Adult. Green; lower back, rump, upper tail-coverts, breast, abdomen, and under tail-coverts lighter and brighter green; head and neck olive greyish-brown; ear-coverts silvery grey; quills brown, edged with green on the outer webs; under wing-coverts yellow; tail-feathers olive-brown, edged on the outer webs and tipped with green: "iris yellow; upper mandible horn-colour, under mandible white; feet black" (Buckley). Total length about 9 inches, wing 6·3, tail 2·7, bill 0·98, tarsus 0·5.

Female. Like the male, only a little smaller.

Hab. Zanzibar and South-eastern Africa, from Mombas to Swaziland.

Dr. Hildebrandt (J. f. O. 1878, p. 241) mentions a specimen with yellow spots on the pileum.

a, b. Ad. sk.	Mombas.	R. B. Sharpe, Esq.
,		[P.].
c. Ad. sk.	Mombas.	Rev. H. Buxton [P.].
d. Ad. sk.	Mombas (Wakefield).	Shelley Coll.
e. Juv. sk.	Zanzibar.	Sir J. Kirk [C.].
f. Ad. sk.	Dar-es-Salaam (Kirk).	Shelley Coll.
g. h, i. Ad. sk.	Pangani River'(Kirk).	Shelley Coll.
k. Ad. sk.	Ugogo (Kirk).	Shelley Coll.

Lower Shiré Valley (Kirk). l. Ad. sk. m. of ad. sk. Olifante River, July (Ayres). Earl Russell [P.]. J. H. Gurney, Esq. [P.]. Shelley Coll.

n-q. ♂ 2 ad. sk. Swaziland, Buckley).

7. Pœocephalus crassus.

Pionias crassus, Sharpe, Journ. Linn. Soc., Zool. xvii. p. 429 (1884) (Ndoruma, Equatorial Africa). Pionias bohndorffi, Sharpe, MS.; Ibis, 1884, p. 359.

July (T, E,

Adult. Green, lower back, rump, breast, abdomen, upper and under tail-coverts lighter and brighter green, with a yellow tinge on the concealed part of the feathers; head and neck brown (two feathers of the pileum are tinged with yellow); ear-coverts with a greyish tinge; throat tinged with olive; quills dusky brown, edged with green on the outer webs; the second, third, and fourth primaries, the bastard-wing and primary-coverts with dark bluishgreen margins; under wing-coverts green; tail-feathers olivebrown, margined and tipped with green; thighs green: "iris red" (Bohndorff). Total length 10 inches, wing 6.7, tail 3, bill 1.03, tarsus 0.55.

Hab. Ndoruma, Equatorial Africa.

The only specimen known of this species is intermediate between P. fuscicapillus and P. flavifrons; it has the head and neck brown like the first, and the rest of the body and also the size similar to the second, which it resembles also in the green under wingcoverts; on the head there are two yellow feathers, which perhaps show that, at a more advanced stage, all the head would have become yellow. I suspect that the specimen examined is a young of P. flavifrons.

a. Ad. sk.

Ndoruma, November.

F. Bohndorff [C.]. (Type of species.)

# 8. Pœocephalus flavifrons.

Pionus flavifrons, Rüpp. Syst. Ueb. Vög. N.O.-Afr. pp. 81, 94, t. 31 (1845); Heugl. Syst. Ueb. n. 469 (1855).

(1849); Heagh, Sg. Cee. H. 465 (1859); Psittacus flavifrons, G. R. Gr. Gen. B. ii. p. 421, n. 5 (1846); id. List Psitt. Brit. Mus. p. 71 (1859); Schleg. Mus. P.-B. Psittaci, p. 35, ind. 1 & 3 (1864); id. op. cit. Revue, p. 9 (partim) (1874). Pœocephalus flavifrons, Bp. Rev. et Mag. de Zool. 1854, p. 154,

n. 212; Rchnw. Vogelbild. in the text of pl. xx. f. 6 (1878-83); id. Journ. f. Orn. 1881, p. 386 (Consp. Psitt. p. 226); Salvad. Ann. Mus. Civ. Gen. (2) i. p. 79 (1884); Gigl. Ann. Mus. Civ. Gen. (2) vi. p. 51 (1888); Salvad. ibid. p. 207 (1888). Peocephalus flavifrons, Bp. Naumannia, 1856, Consp. Psitt. n. 220.

Phæocephalus, sp.? n. 1, Heugl. Journ. f. Orn. 1862, p. 305.

Pionias flavifrons, Finsch, Papag. ii. p. 482 (1868): Heugl. Peterm. Geogr. Mitth. 1869, p. 415; Heugl. Orn. N.O.-Afr. i. 2, p. 742 (1871); id. op. eit. Nachtr. p. clvii (1871); Gieb. Thes. Orn. iii. p. 190 (1877).

Poicephalus flavifrons, G. R. Gr. Hand-list, ii. p. 161, n. 8288 (1870).

Adult. Green; lower back, rump, upper tail-coverts, lower breast, abdomen, and under tail-coverts lighter and brighter; the concealed parts of the feathers have a yellowish tinge; the darker green feathers of the neek, back, breast, and wings have brighter green edges; forehead, vertex, lores, region round the eyes, and upper part of the cheeks yellow; thighs more or less yellow; quills brown, tinged with green on their outer webs and edged with green; tail olivebrown with a golden tinge, especially underneath: "irides red or reddish; bill pale dusky horn-colour, with the lower mandible more or less whitish; feet ashy or blackish" (Antinori). Total length about 12.5 inches, wing 7, tail 3.3, bill 1.1, tarsus 0.6.

Hab. North-east Africa, from Shoa to Abyssinia.

Some specimens have nearly the whole head yellow, others show a few yellow feathers along the carpal edge.

Shoa, Sept. and Dec. (Antinori). Shelley Coll. a, b. ♂♀ ad. sk. Rüppell Coll. c. Ad. st. Shoa.

## 9. Pœocephalus citrinocapillus.

Phæocephalus, sp. 2, Heugl. Journ. f. Orn. 1862, p. 305.

Psittacus flavifrons, part., Schleg. Mus. P.-B. Psittaci, p. 35, specim. 2 (1864).

Phæocephalus citreocapillus, Heugl. in Mus. Lugd., teste Schleg. Mus. P.-B. Psittaci, p. 35 (1864).

Psittacus citrinocapillus, Heugl. MS. Pionias citrinocapillus, Finsch, Papag. ii. p. 484 (1868); Heugl. Orn. N.O.-Afr. i. 2, p. 744 (1871); id. op. cit. Nachtr. p. clvii (1871); Gieb. Thes. Orn. iii. p. 189 (1877).

Psittacus citreicapillus, Heugl. MS.; id. Orn. N.O.-Afr. ii. t. xxvi.

Poicephalus citrinocapillus, G. R. Gr. Hand-list, ii. p. 161, n. 8289 (1870).

Peocephalus citrinocapillus, Rchnw. Vogelbild. t. xx. f. 6 (1878-83); id. Journ. f. Orn. 1881, p. 386 (Consp. Psitt. p. 226).

Adult. Very much like P. flavifrons, but the lower back, rump, upper tail-coverts, abdomen, and under tail-coverts bluish green; the yellow colour of the head more extended; the metacarpal edge yellow; the bill stronger; dimensions nearly the same as those of P. flavifrons.

Young. Head dirty olive-brownish, washed with yellowish; under wing-coverts with broad yellowish-green edges; only some trace of

the yellow feathers on the metacarpal edge.

Hab. Abyssinia.

I have never seen a specimen of this species, but from the fact of its having been found along the Ataba river, where Heuglin also met with P. flavifrons, I doubt whether it is really distinct.

## 10. Pœocephalus senegalus.

Psittacula senegalensis, Briss. Orn. iv. p. 400, pl. xxiv. f. 2 (1760). Psittacus senegalus, Linn. S. N. i. p. 149, n. 43 (1766) (ex Brisson); Gm. S. N. i. p. 347, n. 43 (1788); Lath. Ind. Orn. i. p. 128, n. 138 (1790); Shaw, Gen. Zool. viii. 2, p. 544 (1811); Vieill. N. D. xxv. p. 316 (1817); Kuhl, Consp. Psitt. p. 82 (1820); Vieill. Enc. Méth. iii. p. 1368 (1823); Steph. Gen. Zool. xiv. 1, p. 107 (1826); Voigt, Cuv. Uebers. p. 743 (1831); Less. Tr. d'Orn. p. 200 (1831); Hahn, Orn. Atl., Papag. p. 49, t. 33 (1835); G. R. Gr. Gen. B. ii. p. 421, n. 3 (1846); Hartl. Syst. Orn. W.-Afr. p. 168 (1857); G. R. Gr. List Psitt. Brit. Mus. p. 69 (1859); Hartl. Journ. f. Orn. 1861, p. 262; Schleg. Mus. P.-B. Psittaci, p. 35 (1864); Sharpe, Cat. Afr. B. p. 19 (1871); Schleg. Mus. P.-B. Psittaci, Revue, p. 9 (1874); Ussher, Ibis, 1874, p. 56 (Gold Coast); Hartl. Journ. f. Orn. 1879, p. 189.

Petite Perruche du Sénégal, D'Aubent. Pl. Enl. 288.

Perroquet à tête grise, Buff. Hist. Nat. Ois. vi. p. 123 (1779); Levaill. Perr. pls. 116 (3), 117 (3), 118 (var.) (1805).

Senegal Parrot, Lath. Syn. i. p. 307 (1781); id. Gen. Hist. ii. p. 258

(1822).

Pionus senegalus, Wagl. Mon. Psitt. p. 612 (1832); Hartl. Syst. Verz. Ges. Mus. p. 87 (1844).

Poicephalus senegalensis, Sw. Class. B. ii. p. 301 (1837).

Psittacus senegalensis, Sw. B. of W. Afr. ii. p. 176 (1837); Brehm, Mon, d. Papag. t. 62.

Poiocephalus senegalus, Hartl. Journ. f. Orn. 1854, p. 194; Bolle, Journ. f. Orn. 1856, p. 170.

Pœocephalus senegalus, Bp. Rev. et May. de Zool. 1854, p. 154, n. 215; Sousa, Mus. Nac. Lisb. Psittaci, p. 20 (1869); Rehnw. Vogelbild. t. vii. f. 2 (1878-83); id. Journ. f. Orn. 1881, p. 384 (Consp. Psitt. p. 224); Salvin, Cat. B. Strickl. Coll. p. 463 (1882); Sclat. List Vert. An. 8th ed. p. 337 (1883); Sclat. P. Z. S. 1886,

p. 31; Hartert, Journ. f. Orn. 1886, p. 598. Pœocephalus senegalensis, Souancé, Rev. et Mag. de Zool. 1856, p. 216; Garrod, P. Z. S. 1874, p. 587.

Pæocephalus senegalus, Bp. Naumannia, 1856, Consp. Psitt. n. 217. Pionias senegalus, Finsch, Papag. ii. p. 489 (1868); Gieb. Thes. Orn. iii. p. 192 (1877).

Poicephalus senegalus, G. R. Gr. Hand-list, ii. p. 161, n. 8280 (1870).

Adult male. Head and throat grey, the pileum darker, the earcoverts lighter silvery grey; the rest of the upper parts and a band across the breast, extended along the middle of it, green; lower back, rump, and upper tail-coverts lighter green; lower breast and abdomen yellow, more or less tinged with orange; flanks, under wing-coverts, and under tail-coverts yellow; thighs green; quills and tail-feathers brown, edged with green on the outer webs: bill horn-black; feet dusky brown: "iris brown, yellow, or yellowbrown" (Finsch). Total length 9.5 inches, wing 6, tail 2.7, bill 1.05, tarsus 0.6.

Hab. Gambia, Western Africa.

a. Ad. st. b. Ad. st.

Gambia. W. Africa.

Purchased. H. Squire, Esq. [C.]. 2 B 2

Rufisque, Senegambia, Nov. Tweeddale Coll. c, d. Ad. sk. (L. Laglaize). Shelley Coll. Casamanse (Boucard). e. Ad. sk. Bathurst, R. Gambia (Quin). Sharpe Coll. f. Ad. sk. g. Ad. sk. Gambia (Capt. Moloney). Shelley Coll. h. Skeleton. Zool. Soc. Coll. i. Skeleton.

### 11. Pœocephalus versteri.

Psittacus senegalensis, Allen & Thoms. (nec auct.) Narr. Exped. Niger, i. p. 311 (1848); Shelley, Ibis, 1883, p. 559 (Niger). Psittacus senegalus, Hartl. Syst. Orn. W.-Afr. p. 168 (part) (1857).

Psittacus versteri, Goffin, MS.: Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xvi (1863).

Pionias senegalus (part.), Finsch, Papag. ii. p. 489 (1868). Pœocephalus senegalensis, Forbes, Ibis, 1883, p. 519 (Niger). Preocephalus rufiventris, Forbes, Ibis, 1883, p. 524 (Niger).

Adult. Very much like P. senegalus, from which it differs in having the lower breast and abdomen orange-red: "iris bright vellow, with a slight green circumpupillar ring; bill and feet grevish black; orbits and cere black" (Forbes).

Hab. The Niger Region, Western Africa.

River Niger (J. Baikie). a. Ad. sk. River Niger (Baikie). b. Ad. sk. Sharpe Coll. c, d, e. o ad. sk. Shonga. W. A. Forbes, Esq. [C.]. f. Ad. sk. Accra, April (J. Smith). Sharpe Coll. g. Ad. sk. [Gambia.] Sharpe Coll.

# 12. Pœocephalus rufiventris.

Pionus rufiventris, *Rüpp. Syst. Ueb. Vög. N.O.-Afr.* pp. 83, 94, t. 32 (1845); *Hengl. Syst. Uebers.* n. 470 (1855); *id. Faun. d. Roth.* Meer. n. 194.

Psittacus rufiventris, G. R. Gr. Gen. B. iii. App. p. 20 (1849); id.

List Psitt, Brit. Mus. p. 71 (1859).

List Psitt. Brit. Mus. p. 71 (1859).

Peocephalus rufiventris, Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 214; Horsf. & Moore, Cat. B. Mus. E. I. Co. ii. p. 607 (1856–58); Blyth, Journ. A. S. B. xxiv. p. 298 (1855); Speke, Ibis, 1860, p. 243; Sclat. Rep. Coll. Somal. Country, p. 9 (1860); Rehnw. Vogelbild. t. xx. f. 7 (1878–83); id. Journ. f. Orn. 1881, p. 386 (Consp. Psitt. p. 226); Salvad. Ann. Mus. Civ. Gen. (2) i. pp. 78, 261 (1884); Fischer, Zeitschr. f. ges. Orn. 1884, p. 372 (Masai); id. Journ. f. Orn. 1885, p. 122; Shelley, Ibis, 1885, p. 393 (Somaliland); Gigl. Ann. Mus. Civ. Gen. (2) vi. p. 51 (1888); Salvad. ibid. p. 207 (1888).

Pæocephalus rufiventris, Bn. Naumannia, 1856. Consp. Psitt. p. 218

Pæocephalus rufiventris, Bp. Naumannia, 1856, Consp. Psitt. n. 218. Pionias rufiventris, Finsch, Papag. ii. p. 487 (1868); Heugl. Peterm. Geogr. Mitth. 1869, p. 415; Finsch & Hartl. Vög. O.-Afr. p. 498 (1870); Heugl. Orn. N.O.-Afr. i. 2, p. 741 (1871); id. op. cit. Nachtr. p. clvii (1871); Fischer, Journ. f. Orn. 1878, p. 215; Cab. Journ. f. Orn. 1878, p. 241.

Poicephalus rufiventris, G. R. Gr. Hand-list, ii. p. 161, n. 8287 (1870).

Pœocephalus simplex, Rchnw. Journ. f. Orn. 1887, p. 55 (Serian, Victoria Nyanza; ♀).

Adult male. Head, neck, back, and wings brown, the cheeks and front part of the neck with a reddish tinge; rump bluish green, upper tail-coverts light green, with the bases yellow; breast and under wing-coverts scarlet; abdomen and under tail-coverts light green, with the base of the feathers orange-yellow; tail brown with a reddish tinge, nearly obsolete on the inner webs of the outer feathers: "iris orange, red, or maroon; bill horn-black; feet dark or bluish" (Antinori). Total length 9 inches, wing 6·1, tail 3·1, bill 0·98, tarsus 0·5.

Female. Differs from the male in having the feathers of the breast brown-reddish, with green edges, and the under wing-coverts

brown.

Hab. Eastern Africa, from Abyssinia to Massai-Land.

a, b. Ad. st.
 c-g. Ad. sk.
 h. ♂ ad. sk.
 i. ♂ ad. sk.
 k. Skeleton.

Shoa (Harris). Abyssinia (Harris). Shoa (Antinori). Taita, July. Hon. E. India Co. [P.]. India Museum [P.]. Shelley Coll. Dr. Hildebrandt [P.].

## 13. Pœocephalus meyeri.

Psittacus meyeri, Rüpp. in Cretzschmar's Atlas, p. 18, t. 11 (1826); Voigt, Cuv. Uebers. p. 743 (1831); Rüpp. Neue Wirbelth., Vög. pp. 61, 62 (1835); Bowrj. Perr. pl. 61 (1837-38); G. R. Gr. Gen. B. ii. p. 421, n. 4 (1846); id. List Psitt. Brit. Mus. p. 70 (1859)! Schleg. Mus. P.-B. Psitt. p. 36 (1864); Pelz. Verh. z.-b. Gesell. Wien, 1865, p. 923 (var.); Chapm. Trav. in S. Afr., App. p. 406 (1868); Ayres & Gurn. Ibis, 1869, p. 296; Sharpe, Cat. Afr. B. p. 19 (1871); Buckley, Ibis, 1874, p. 369; Schleg. Mus. P.-B. Psittaci, Revue, p. 10 (1874); Sharpe, Layard's Birds S. Afr. p. 95 (1875-84); id. in Oates' Matab. Land & Vict. Falls, App. p. 307 (1881); Hartl. Abh. Brem. vii. p. 126 (1881); Shelley, Ibis, 1882, p. 249; Tristr. Cat. Coll. B. p. 78 (1889).

Pionus meyeri, Wagl. Mon. Psitt. p. 613 (1832); Hartl. Syst. Verz. Ges. Mus. p. 88 (1844); Rüpp. Syst. Ueb. d. Vög. N.O.-Afr. p. 94 (1845); Lefebvre, Abyss., Ois. p. 128 (1846–50); Hengl. Syst. Uebers, n. 468 (1855); id. Faun. Roth. Meer. n. 193; Brehm, Reis. nuch Habesch, p. 363 (1863); Hengl. Journ. f. Orn. 1864, p. 153; Antin. Catal. p. 2 (1864); id. Journ. f. Orn. 1866, p. 113; Blanf. Geol. & Zool. Abyss. p. 304 (1870); Hartl. Abh. Brem. vii. p. 114 (1881); Dub. Bull. Mus. Roy. d'H. N. Belg. iv. p. 147 (1886)

(Tanganyika).

Psittacus flavoscapulatus, Ehrenb., fide Gray, Gen. B. iii. App. p. 20 (1849).

Psittacus mayerii (sic), Bianc. Specim. Mosamb. fasc. iv. p. 49 (1851);

Heugl. Journ. f. Orn. 1862, p. 294.

Pœocephalus meyeri, Strickl. § Sclat. Contr. Orn. 1852, p. 156
(Damara-Land); Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 213;
Souancé, Rev. et Mag. de Zool. 1856, p. 216; Sclat. P. Z. S. 1860,
p. 197 (note); Bocage, Jorn. Sc. Lisb. n. 5, 1868, p. 45; Sousa,
Mus. Nac. Lisb. Psittaci, p. 19 (1869); Bocage, Jorn. Sc. Lisb. n. 8, 1870, p. 348; Garrod, P. Z. S. 1876, p. 692; Rehnw. Vogelbild.

t. vii. f. 1 (1878-83); id. Journ. f. Orn. 1881, p. 385 (Consp. Psitt. p. 224); Salv. Cat. B. Strickl. Coll. p. 463 (1882); Sclat. List Vert. An. 8th ed. p. 337 (1883); ? Forbes, Ibis, 1883, p. 525 (Niger); Schal. Journ. f. Orn. 1883, p. 345; Salvad. Ann. Mus. Civ. Gen. (2) i. p. 255 (1884); Fischer, Zeitschr. f. ges. Orn. 1884, p. 372; id. Journ. f. Orn. 1885, p. 122; Ayres, Ibis, 1886, p. 291 (Transvaal); Schal. Journ. f. Orn. 1887, p. 231; Rehnw. Journ. f. Orn. 1891,

Pæocephalus meyeri, Bp. Naumannia, 1856, Consp. Psitt. no. 219.

Preocephalus meyeri, Bpl. National Action Comp. 1836, p. 170.
Pionus mayeri (sic), Heugl. Journ. f. Orn. 1856, p. 170.
Pionus mayeri (sic), Heugl. Journ. f. Orn. 1862, p. 37.
Pheocephalus xanthopterns, Heugl. Journ. f. Orn. 1863, p. 271.
Pionias meyeri, Finsch, Papag. ii. p. 464 (1868); Heugl. Peterm.
Geogr. Mitth. 1869, pp. 413, 415; Finsch u. Hartl. Vög. O.-Afr.
p. 500 (1870); Finsch, Trans. Zool. Soc. vii. p. 270 (1870); Heugl. Orn. N.O.-Afr. i. 2, p. 743 (1871); id. op. cit. Nachtr. p. clvii (1871); Antin. e Salvad. Ann. Mus. Civ. Gen. iv. p. 403 (1873); Gieb. Thes. Orn. iii. p. 191 (1877); Bocage, Orn. Ang. pp. xiv, 68 (1881); Böhm, Journ. f. Orn. 1882, p. 207; Holub u. Pelz. Beitr. Orn. Südafr. p. 159 (1882); Sharpe, Journ. Linn. Soc., Zool. xyii.

p. 430 (1884); Böhm, Journ. f. Orn. 1886, p. 428; Matschie, Journ. f. Orn. 1887, p. 149. Poicephalus meyeri, G. R. Gr. Hand-list, ii. p. 161, n. 8284 (1870);

Anderss. B. Damara-Land, p. 213 (1872).

Adult. Head, neck, interscapular region, wings, and tail brown; very often, but not always, a broad yellow erescent-like band across the crown; bend of the wing, metacarpal edge, under wing-coverts. and thighs yellow; lower back, rump, breast, flanks, abdomen, upper and under tail-coverts bluish green, in some specimens more bluish than green: "irides red" (Heuglin); "bare skin surrounding the eve black; bill darkish horn-colour, with a tinge of green; legs and toes greenish black; iris deep bright red-orange" (Andersson). Total length about 9 inches, wing 5.6, tail 2.6, bill 0.9, tarsus 0.6.

Young. No yellow band on the erown; the seapulars and the wing-coverts edged with green; the yellow feathers of the bend of the wing and the under wing-coverts with brown bases; thighs green; the lower back and the rump brighter blue and less green:

the lower parts decidedly green, with no bluish tinge.

Zambesi (Bradshaw).

q. Ad. sk.

Hab. Equatorial Africa from Abyssinia to Transvaal on the east, and through the interior to Benguela and Damara-Land on the west.

a, b. Ad. et juv. st. c, d. Ad. sk. e, f, g. ♂ ♀ ad. sk.	Abyssinia. Abyssinia. Kokai, Abyssinia, July.	Rüppell [C.]. Rüppell [C.]. W.T. Blanford, Esq. [C.].
$h$ . $\beta$ ad. sk. $i$ , $k$ . $\beta$ ad. et $\varphi$	Kokai, Abyssinia, July ( <i>Jesse</i> ). Kokai, Abyssinia, July ( <i>Jesse</i> ).	Shelley Coll. Tweeddale Coll.
juv. sk. l. ♀ ad. sk. m. ♀ ad. sk.	Kokai, Abyssinia, July ( <i>Jesse</i> ). Kokai, Abyssinia, July ( <i>Jesse</i> ).	Salvin-Godman Coll. Sharpe Coll.
n. ♀ ad. sk. o. Ad. sk. p. Ad. sk.	Waliko, Abyssinia, July ( <i>Jesse</i> ). Bogos ( <i>Esler</i> ). Kutahugali, Nyam Nyam, Sep-	Tweeddale Coll. Shelley Coll. F. Bohndorff, Esq.
//. 11tt. SK.	tember	[C]

Shelley Coll.

*r*−*u*. Ad. sk. Tette (Livingstone). Lord Russell [P.]. v. ♀ ad. sk. Makalaka, September. W. E. & C. G. Oates, Esqrs. [P.].  $w, x. \not \subseteq ad. sk.$ Matabili, July (T. E. Buckley). Shelley Coll. W. E. & C. G. Oates,  $y, z. \ \mathcal{J} \ \mathcal{Q} \ \text{ad. sk.}$ Tati, October. Esqrs. [P.]. Shelley Coll. a'. Q ad. sk. Bamanguato, July (T. E. Buckley).b'.  $\supseteq$  juv. sk. Limpopo River, July (T. Ayres). J. H. Gurney, Esq. [P.]. Sharpe Coll. c', d'. Ad. sk. Transvaal (Ayres). e'. J juv. sk. Holfontein, Transvaal. W. E. & C.G. Oates, Esqrs. [P.]. f'. Ad. sk. Lake Ngami (Chapman). Sharpe Coll. g'. ♀ ad. sk. h'. ♀ ad. sk. Sharpe Coll. Ondonga, Jan. (Andersson). Caconda, Dec. (Anchieta). Shelley Coll. i'. Skeleton. W. T. Blanford, Esq. Abyssinia. [C.].

## 14. Pœocephalus rüppelli.

Psittacus riippellii, G. R. Gr. P. Z. S. 1848, p. 125, pl. v. (River Nunez); id. Gen. B. iii. App. p. 20 (1849); Hartl. Syst. Orn. W.-Afr. p. 168 (1857); G. R. Gr. List Psitt. Brit. Mus. p. 71 (1859); Hartl. Journ. f. Orn. 1861, p. 262 (Gaboon); Schleg. Mus. P.-B. Psittaci, p. 36 (1864); Monteiro, P. Z. S. 1865, p. 94; Chapm. Trav. in S. Afr., App. p. 406 (1868); Sharpe, Cat. Afr. B. p. 19 (1871); Schleg. Mus. P.-B. Psittaci, Revue, p. 10 (1874).

Peocephalus rüppelli, Strickl. & Sclat. Contr. Orn. 1852, p. 156 (Damara-Land); Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 217; Sonancé, Rev. et Mag. de Zool. 1856, p. 216; Bocage, Jorn. Sc. Lisb. n. 4, 1867, p. 335; Sonsa, Mus. Nac. Lisb. Psittaci, p. 20 (1869); Bocage, Jorn. Sc. Lisb. n. 17, 1874, p. 57; Rchnw. Vogelbild. t. vii. f. 3 (1878–83); id. Journ. f. Orn. 1881, p. 385 (Consp. Psitt. p. 225).

Poiocephalus riippellii, Hartl. Journ. f. Orn. 1854, p. 194, Ber. p. lxiii.

Pæocephalus riippelli, Bp. Naumannia, 1856, Consp. Psitt. n. 216. Phæocephalus riippelli, Heugl. Journ. f. Orn. 1863, p. 271.

Pionias rüppelli, Finsch, Papag. ii. p. 498 (1868); Gieb. Thes. Orn. iii. p. 192 (1877); Bocage, Orn. Ang. pp. xiv, 67 (1881).

Poicephalus riippellii, G. K. Gr. Hand-list, ii. p. 161, n. 8286 (1870); Anderss. B. Damara-Land, p. 214 (1872).

Psittacus rueppelli, Sharpe, Layard's Birds of S. Afr. p. 196 (1875–84); Tristr. Cat. Coll. B. p. 78 (1889).

Pœocephalus rueppelli, Salv. Cat. B. Strickl. Coll. p. 463 (1882); Sclat. P. Z. S. 1882, pp. 421, 577, pl. xlii.; id. List Vert. An. 8th ed. p. 338 (1883) (East Africa!).

Adult male. General colour above and below smoky brown; sides of the head greyish, the ear-coverts decidedly inclining to silvery grey; the feathers of the rump and the upper tail-coverts with darker edges; smaller wing-coverts on the bend of wings, metacarpal edge, and under wing-coverts yellow; thighs also yellow, more or less with an orange tinge: bill and feet dark horn-colour; iris orange. Total length 8.5 inches, wing 5.5, tail 3, bill 0.95, tarsus 0.6.

Adult female. Brighter than the male, having the lower back, rump, and upper tail-coverts bright blue, vent and under tail-coverts duller blue; in size smaller than the male.

Young. Like the female, but with the lower back, rump, and upper tail-coverts of a brighter blue; the blue wash on the vent and under tail-coverts paler; no yellow patch on the bend of the wing; the under wing-coverts of a duller yellow, the metacarpal edge pale yellowish brown.

Hab. South-western Africa from Benguela, or perhaps also from

Gaboon, to Damara-Land \*.

a. Ad. st.	West Africa.	Zool. Soc. Coll. (Type of species.)
b. Ad. st.	[River Nunez] Damara-Land (Andersson).	Bartlett Coll.
c. Ad. sk.	[River Nunez] Damara-Land (Andersson).	Bartlett Coll.
d. Ad. sk.	Benguela.	Monteiro Coll.
e. [♀] ad. sk.	Maconjo (Anchieta).	Shelley Coll.
f. Ad. sk.	Capangombe (Anchieta).	Sharpe Coll.
g. Ad. sk.	Damara-Land (Andersson).	Sharpe Coll.
h. ♀ ad. sk.	Otjimbinque, Damara-Land, Oct. (Andersson).	Tweeddale Coll.
i, k. d ad. et juv. sk.	Otjimbinque, Damara-Land, June, Oct. (Andersson).	· Sharpe Coll.
l. ♀ ad. sk.	Omarura, Damara-Land, November (Andersson).	Sharpe Coll.
m. ∂ ad. sk.	[Abvssinia.]	Shelley Coll.
$n, o, p. \beta \ $ ad. sk.	West Africa.	Zool. Šoc. Coll.

# Subfamily IV. PSITTACINÆ.

Cere broad, surrounding the base of the upper mandible, but narrower below the nostrils; nostrils rounded, not encircled by a swelling of the cere; periophthalmic region, and frequently also the lores, naked; bill not notched, under mandible longer than deep; wings moderately long; tail square or rounded, sometimes shorter, sometimes longer than half the length of the wing; plumage grey or black, often partly red. Sexes alike.

Range. The Ethiopian Region, with Madagascar and its depen-

dencies, and also New Guinea.

# Key to the Genera.

<sup>\*</sup> Dr. Sharpe assures me that the birds mentioned by Gray as from Nunez River, and received from Mr. Bartlett, no doubt were Andersson's birds from Damara-Land.

b. Tail longer than half the length of the wing.

a'. Tail square or rounded, about two thirds of the length of the wing; bill rather thick, swollen at the sides and without a distinct notch on the upper mandible; periophthalmic region naked; lores

naked and thinly feathered ....... 28. Coracopsis, p. 380.

b'. Tail scarcely rounded, nearly square, about three fifths of the length of the wing; bill rather long, much longer than deep, with no notch, and with the gonys much slanting forwards; the greater part of the 

### 27. PSITTACUS.

Type. Psittacus, Linn. S. N. i. p. 139 (1766)..... P. erithacus. Androglossa, Vig. Zool. Journ. ii. p. 400 (1825) (= Psittaens, auct.). Rhodurus, Sundev. Meth. nat. Av. disp. Tent. p. 69

P. erithacus. (1872)

Range, Confined to intertropical Africa from the West to Central Africa.

## Key to the Species.

a. Plumage ash-colour; tail bright red ..... erithacus, p. 377. b. Plumage dark grey; tail dull dark red ..... timneh, p. 380.

#### Psittacus erithacus.

Psittacus erithacus, Linn. Mus. Ad. Friedr. i. p. 14 (1754); id. S. N. i. p. 114, n. 24 (1766); Scop. Ann. I. Hist. Nat. p. 31, n. 30 (1769); Gm. S. N. i. p. 332, n. 24 (1788); Lath. Ind. Orn. i. p. 109, n. 83 (1790); Shaw, Gen. Zool. viii. 2, p. 486 (1811); Bechst. Lath. Uebers. p. 90 (1811); Vieill. N. Diet. xxv. p. 308 (1817); Kuhl, Consp. Psitt. p. 83 (1820); Vieill. Enc. Méth. iii. p. 1362 (1823); Steph. Gen. Zool. xiv. 1, p. 107 (1826); Denh. & Clapp. Narr. Trav. App. p. 197 (1826); Voigt, Cuv. Uebers. p. 739 (1831); Less. Tr. d'Orn. p. 197 (partim) (1831); Wayl. Mon. Psitt. p. 579 (1832); Owen, P. Z. S. 1832, p. 23; Hahn, Orn. Atl., Papag. p. 38, t. 22 (1834); Selby, Nat. Libr., Parrots, p. 106, pl. 10 (1836); Sw. Class. B. ii. p. 301 (1837); Hartl. Syst. Verz. Ges. Mus. p. 87 (1844); G. R. Gr. Gen. B. ii. p. 421, n. 1 (1846); Schmidt, Beitr. z. Flor. d. Capverd. Ins. p. 33; Bp. Consp. Av. i. p. 5 (1850); Hartl. Journ. f. Orn. 1854, p. 193; Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 208; Brehm, Mon. d. Pap. t. 66 (1855); Sund. Journ. f. Orn. 1855, p. 165; Souancé, Rev. et Mag. (1859); Sand. Journ. J. Orn. 1859, p. 105; Sondace, Rev. et Magy. de Zool. 1856, p. 215; Bp. Naumunnia, 1856, Consp. Psitt. n. 221; Bolle, Journ. f. Orn. 1856, p. 23; Hartl. Syst. Orn. W.-Afr. p. 166 (1857); Crisp, P. Z. S. 1857, p. 215; G. R. Gr. List Psitt. Brit. Mus. p. 69 (1859); Crisp, P. Z. S. 1860, p. 258; Hartl. Journ. f. Orn. 1861, p. 262; Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xvi (1863); Parker, P. Z. S. 1863, p. 516; Heugl. Journ. f. Orn.

1863, p. 271; Schleg. Mus. P.-B. Psittaci, p. 37 (1864); Parker, P. Z. S. 1865, p. 238 (note); Keulem. Ned. Tijdschr. Dierk. iii. p. 380 (1866); Dohrn, P. Z. S. 1866, pp. 325, 329 (Prince Isl.); Brehm, Thierleb. iii. p. 21 (with figure) (1866); Finsch, Papay. iii. p. 308 (1868); Sousa, Mus. Nac. Lisb. Psittaci, p. 19 (1869); G. R. Gr. Hand-list, ii. p. 160, n. 8268 (1870); Sharpe, Ibis, 1870, p. 57 (Fantee); Lüdher, Journ. f. Orn. 1871, p. 334; Sharpe, Cut. Afr. B. p. 19 (1871); Heugl. Orn. N.O.-Afr. i. 2, p. 745 (1871); Stölker, Journ. f. Orn. 1872, p. 18; Rehmw. u. Lühder, Journ. f. Orn. 1873, p. 218; Rehmw. ibid. p. 299; Garrod, P. Z. S. 1873, pp. 466, 633, 1874, p. 587; Ussher, Ibis, 1874, p. 56; Sclat. Ibis, 1874, p. 185 (West of Lake Tangyanika); Rehmw. Journ. f. Orn. 1875, p. 10 (Goldküste, Nigergegend, Kamerum, Gabun), p. 48; Gulliv. P. Z. S. 1875, p. 489; Forbes, P. Z. S. 1877, p. 307; Rehmw. Journ. f. Orn. 1877, p. 14 (Loango); Gieb. Thes. Orn. iii. p. 336 (1877); Fischer, Journ. f. Orn. 1880, p. 189 (Tanganika); Rehmw. Vogelbild. t. vii. f. 5 (1878–83); id. Journ. f. Orn. 1881, p. 262 (Consp. Psitt. p. 150); Bocage, Orn. d'Ang. p. 66 (1881); Hartl. Abh. Brem. vii. p. 126 (1881), viii. p. 211 (1882); Forbes, Ibis, 1883, p. 505 (Niger); Sclat. List Vert. An. 8th ed. p. 336 (1883); Blas. Journ. f. Orn. 1884, p. 229; Rehmw. Journ. f. Orn. 1886, pp. 570, 598; Rehmw. Journ. f. Orn. 1887, pp. 56, 220, 305; Shelley, P. Z. S. 1888, p. 44; Rehmw. Journ. f. Orn. 1880, p. 110. Eittbewer environment environ

Psittacus guineensis cinereus, Briss. Orn. iv. p. 310 (1760). Perroquet cendré de Guinée, D'Aubent. Pl. Enl. 311.

Le Jaco, ou Perroquet cendré, Buff. Hist. Nat. Ois. vi. p. 100 (1779). Ash-coloured Parrot, Lath. Syn. i. p. 261 (1781); id. Gen. Hist. ii. p. 208 (1822).

Le Perroquet cendré, Levaill. Perr. ii. pls. 99, 100, 103 (1805). Psittacus pulverulentus, Magyar László (nec Gm.), Delafrik, Utazásai, i. p. 242 (1849-57).

Grev Parrot, Monteiro, Angola & Congo, i. p. 54 (1875).

### Var. a.

Psittacus ruber, Scop. Annus I. Hist. Nat. p. 32, n. 31 (1769).
Ash-coloured Parrot, var. C, Lath. Syn. i. p. 262 (1781); id. Gen. Hist. ii. p. 209 (1822).

Psittacus erithacus, var. 8, Gm. S. N. i. p. 332 (1788); Lath. Ind. Orn. i. p. 110 (1790); Kuhl, Consp. Psitt. p. 83, var. 2 (1820).
 Le Perroquet cendré tapiré, Levaill. Perr. ii. pl. 101 (1805).

# Var. $\beta$ .

Cacatua alis et cauda rubris, Briss. Orn. iv. p. 214 (1760) (ex Aldrovandio).

Psittacus erythroleucus, Linn. S. N. i. p. 144, n. 23 (1766) (ex Aldrovandio); Gm. S. N. i. p. 332, no. 23 (1788); Lath. Ind. Orn. i. p. 109, n. 82 (1790); Bechst. Lath. Ueb. p. 89 (1812); Vieill. Enc. Méth. iii. p. 1414 (1823).

## Var. γ.

The Ash-colour'd and Red Parrot, Edw. Nat. Hist. B. ii. p. 163, pl. 163 (1750).

Psittacus Guineensis alis rubris, Briss. Orn. iv. p. 312 (1760).

Psittacus Guineensis rubro varius, Briss. Orn. iv. p. 313 (1760). Ash-coloured Parrot, var. A et B, Lath. Syn. i. p. 262 (1781); id. Gen. Hist. ii. p. 209 (1822).

Psittacus erithacus, var. β, γ, Gm. S. N. i. p. 332 (1788); Lath. Ind. Orn. i. p. 110 (1790); Wagl. Mon. Psitt. p. 579, var. a (1832).

King-Parrot, Monteiro, Angola & Congo, i. p. 54 (1875). Psittaeus rubrovarius, Rochebr. Act. Soc. Linn. Bord. viii. pp. 167, 168 (1884); id. Faun. Sénég., Ois. p. 84, pl. 10 (1884); Ibis, 1885, p. 322; Shelley, P. Z. S. 1886, p. 44.

### Var. δ.

? Maracana brasiliensibus, Marcgr. Hist. Bras. libr. ix. p. 207. Psittacus brasiliensis cinereus, Briss. Orn. iv. p. 313 (1760) (ex Maregrar).

Cinereous Parrot, Lath. Syn. i. p. 263 (1781); id. Gen. Hist. ii.

p. 210 (1822).

i. Skeleton.

Psittacus cinereus, Gm. S. N. i. p. 333, n. 97 (1788); Lath. Ind. Orn. i. p. 110, n. 84 (1790); Bechst. Kurze Ueb. p. 90 (1812).

Adult. Ash-coloured, rump and abdomen much lighter; the feathers of the head and neck with whitish edges, those of the abdomen with darker edges; primaries blackish, with a grey tinge towards the base; upper and under tail-coverts and tail red; forehead, lores, and sides of the head devoid of feathers, but covered with whitish small papillæ: bill black; feet grey; irides pale yellow. Total length about 13 inches, wing 9.1, tail 3.3, bill 1.5 to 1.3. tarsus 0.7.

Young. Differs in having the tail dark red towards the tip, and the under tail-coverts dark red tinged with greyish.

Hab. Equatorial Africa from Senegambia, Guinea, Congo region, and Prince Island in the Gulf of Guinea, across Africa to the east of Lake Nyanza,

Some specimens are much darker than the ordinary ones, resembling in that respect P. timneh; they probably belong to a distinct race. Other specimens have a great many red feathers irregularly distributed all over the body, and it has been stated that they belong to a distinct race, only found in the Interior.

a. Ad. st.		Purchased.
b. Ad. st.	Africa.	Sir A. Panizzi [P.].
c. Ad. sk.	W. Africa.	Purchased.
d. Ad. sk.	W. Africa.	Sharpe Coll.
e. Ad. sk.	Fantee.	Sharpe Coll.
f. Ad. sk. (1	Dark var.)	Purchased.
	Red var.) Africa.	Mrs. Wallis [P.].
h. Q ad. sk.	(Red Land der Mabod	e, Equa- Emin Pasha [P.].
var.)		

### 2. Psittacus timneh.

Seconde variété du Perroquet cendré, Levaill. Perr. pl. 102 (1805). Psittacus erythacus, var. 1, Kuhl, Consp. Psitt. p. 83 (1820).

Psittacus erythacus, var. γ, Wayl. Mon. Psitt. p. 579 (1832).
Psittacus timneh, Fraser, P. Z. S. 1844, p. 38; G. R. Gr. Gen. B.
ii. p. 421, n. 6 (1846); Bp. Rev. et Mag. de Zool. 1854, p. 154,
n. 209; Hartl. Journ. f. Orn. 1854, p. 194; Souancé, Rer. et Mag.
de Zool. 1856, p. 215; Bp. Naumannia, 1856, Consp. Psitt. n. 222;
Hartl. Syst. Orn. W.-Afr. p. 167 (1857); G. R. Gr. List Psitt.
Brit. Mus. p. 69 (1859); Sclat. P. Z. S. 1861, p. 101; Finsch,
Papag. ii. p. 315 (1808); Sousa, Mus. Nac. Lisboa, Psittaci, p. 19
(1869); G. R. Gr. Hand-list, ii. p. 160, n. 8269 (1870); Sclat.
P. Z. S. 1871, p. 494; Schleg. Mus. P.-B. Psittaci, Revue, p. 10
(1874); Gieb. Thes. Orn. iii. p. 345 (1877); Rehnw. Orn. Centralbl.
1878, p. 64; id. Journ. f. Orn. 1878, p. 209, 1879, p. 213; Rehnw.
Vogelbild. t. vii. f. 4 (1878–83); Büttik. Not. Leyd. Mus vii.
p. 212 (1885); Tristr. Cat. Coll. B. p. 78 (1890).

p. 212 (1885); Tristr. Cat. Coll. B. p. 78 (1890). Psittacus carycinurus, Rehnw. Journ. f. Orn. 1881, p. 262 (Consp. Psitt. p. 150); id. Vogelbild., Syst. Verz. n. 274 (1883).

Adult. Dark grey; lower back, rump, and abdomen light grey; the feathers of the head and neck have lighter edges; on the checks each feather has a small whitish spot; forehead and periophthalmic region naked, covered with small whitish papillæ; upper tail-coverts dark grey; the longer under tail-coverts dark grey with some red tinge; quills blackish; tail-feathers dull dark red, with the edges darker and browner: "irides pale yellow or yellowish white; the base of the maxilla pale horn-colour, tip and lower mandible black; feet grey" (Büttikofer). Total length about 12 inches, wing 8·7, tail 2·3, bill 1·3, tarsus 0·65.

Hab. Liberia and lower Sierra Leone.

The second specimen in the list is much darker than the type.

a. Ad. sk. Zoological Society Coll. (Type of species.)
b.  $\sigma$  ad. sk. Sierra Leone (?). Zoological Society Coll.

#### 28. CORACOPSIS.

Coracopsis, Wagl. Mon. Psitt. p. 501 (1832)	C. nigra.
Vigorsia, Sw. Class. B. ii. p. 304 (1837)	C. vasa.
Vaza, G. R. Gr. List Gen. & Subgen. B. p. 85, n. 1443	Cl minus
(1855)	C. nigra.

Range. The Madagascar subregion.

# Key to the Species.

a. Underparts nearly black.	
a'. Larger: wing 12 inches	vasa, p. 381.
	nigra, p. 382.

". Primaries pale brown, like the rest of the plumage, with no grey colour on their outer webs ......

sibilans, p. 384.

## 1. Coracopsis vasa.

Le Grand Vaza, Levaill. Perr. ii. p. 23, pl. 81 (1805).

Psittacus vasa, Shaw, Gen. Zool. viii. 2, p. 528 (1811) (ex Levaillant); Kuhl, Consp. Psitt. p. 29 (1820); Sibree, Madag. and its People,

p. 547 (1869).

Psittacus obscurus, Bechst. (nec Linn.) Lath. Ueb. p. 89 (1811); Schleg. Mus. P.-B. Psittaci, p. 37 (1864); Schleg. et Poll. Rech. Faun. Madag. pp. 51, 157 (partim) (1868); Schleg. Mus. P.-B. Psittaci, Revne, p. 10 (1874).

Vasa Parrot, Lath. Gen. Hist. ii. p. 213 (1822).

Platycercus vasa, Vig. Zool. Journ. iii. p. 244 (1827); Benn. Gard.

& Menag. of the Zool. Soc. ii. p. 247 (1831).

Psittacus vaza, Less. Tr. d'Orn. p. 197 (1831); Finsch, Papag. ii. pp. 301, 955 (1868); Gieb. Thes. Orn. iii. p. 346 (partim) (1877).

Coracopsis nigra (part.), Wayl. Mon. Psitt. p. 680 (1832); G. R. Gr. Gen. B. ii. p. 407, n. 2 (partim) (1846).

Vigorsia vasa, Sw. Class. B. ii. p. 304 (1837).

Coracopsis vasa, Bp. Consp. Av. i. p. 7 (1850); id. Rev. et Mag. de Zool. 1854, p. 154, n. 246; Souancé, Rev. et Mag. de Zool. 1856, p. 223; Bp. Naumannia, 1856, Consp. Psitt. n. 237; Pelz. Naumannia, 1858, p. 497; Kollar, Sitzb. d. Ak. Wiss. zu Wien, 1858, p. 342; Hartl. Journ. f. Corn. 1860, p. 106; id. Orn. Beitr. Faun. Madag. p. 58 (1861); Sclat. P. Z. S. 1863, p. 164; E. Newt. Ibis, 1863, p. 452; A. Newt. Ibis, 1865, p. 224; id. P. Z. S. 1865, p. 834; Grandid. Rev. et Mag. de Zool. 1867, p. 389; Sousa, Mus. Nac. Lisboa, Psittaci, p. 22 (1869); A. & E. Newt. Ibis, 1876, p. 284; Onst. Bull. Soc. Philom. Poris, (7) ii. p. 165 (1878); Sclat. List Vert. An. 8th ed. p. 335 (1883); id. P. Z. S. 1884, pp. 410, 562.

Coracopsis vaza, G. R. Gr. List Psitt. Brit. Mus. p. 2 (1859); Maillard, Not. sur l'île de la Réun. p. 162 (1862) (Réunion); Pollen, Ned. Tijdschr. Dierk. i. p. 299 (1863); Roch & E. Newt. Ibis, 1863, p. 165; Hartl. Vög. Madag. p. 228 (1877); Rehnw.

Vogelbild. t. vii. f. 8 (1878-83).

Coracopsis melanorhyncha, Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xx (1863); Rehnw. Journ. f. Orn. 1881, p. 260 (Consp. Psitt. p. 148).

Vaza obscura, Schleg. Handl. d. Dierk. i. p. 71 (1857); id. Dierent. p. 71 (with figure) (1864); Coquer. Bull. Soc. Accl. de la Réun. ii. p. 10 (1864).

Vaza vaza, G. R. Gr. Hand-list, ii. p. 159, n. 8264 (1870).

Vaza melanorhyncha, G. R. Gr. op. cit. n. 8265 (1870).

Coracopsis obscura, Milne-Edw. et Grand. Hist. Madag., Ois. i. p. 1, Atl. pls. i., ii., v. (1876); Rehnw. Vogelbild., Syst. Verz. n. 270 (1883); Sibree, Madag. Orn. pp. 13, 21 (1889); id. Ibis, 1891, pp. 212, 214.

Adult. Blackish brown; wings, lower back, upper tail-coverts,

and tail glaucous grey; the smaller and median upper wing-coverts darker, blackish brown; under tail-coverts grey, with black shafts; across the middle of the tail a darker band, scarcely perceptible: naked skin round the eyes and cere yellowish; bill black after the moult, becomes whitish later on; irides and feet dusky brown. Total length about 20 inches, wing 12, tail 8, bill 1.55, tarsus 0.9.

Female. Duller.

Hab. Madagascar. It has been introduced in Réunion Island.

a. Ad. sk. Madagascar. The Duke of Sussex [P.]. Shelley Coll. Madagascar, June. b. Ad. sk. c. of ad. sk. R. B. Sharpe, Esq. [P.]. Madagascar. Tamatave, Madagascar, Purchased. d. Juv. sk. June.

## 2. Coracopsis nigra.

Black Parrot, Edw. Nat. Hist. B. i. p. 5, pl. 5 (1750); Lath. Syn. i. p. 264 (1781); id. Gen. Hist. ii. p. 212 (1822).

Psittacus madagascariensis niger, Briss. Orn. iv. p. 1317 (1760).

Psittacus niger, Linn. S. N. 1. p. 145, n. 29 (1766) (ex Edwards); Gm. S. N. i. p. 336, n. 29 (1788); Lath. Ind. Orn. i. p. 111, n. 86 (1790); Shaw, Gen. Zool. viii. 2, p. 529 (1811); Bechst. Lath. Ueb. p. 89 (1812); Vieill. N. D. xxv. p. 317 (1817); Kuhl, Consp. Psitt. p. 28 (1820); Vicill. Enc. Méth. iii. p. 1369, pl. 227. f. 2 (1823); Voigt, Cuv. Uebers. p. 729 (1831); Sganz. Mém. Soc. Hist. Nat. Strasb. iii. p. 35 (1840); Schleg. Mus. P.-B. Psittaci, p. 37 (1864); id. P. Z. S. 1866, p. 424; Finsch, Papag. ii. pp. 298, 955 (1868); Schleg. et Poll. Rech. Fann. Madag. pp. 52, 157. (1868); Schleg. Mus. P.-B. Psittaci, Revue, p. 10 (1874); Gieb. Thes. Orn, iii. p. 341 (1877).

Le Perroquet noir de Madagascar, Daubent. Pl. Enl. 500. Le Vaza, on Perroquet noir, Buff. Hist. Nat. Ois. vi. p. 119 (1779).

Le Petit Vaza, Levaill. Perr. pl. 82 (1805). Psittacus vaza, var., Less. Tr. d'Orn. p. 197 (1831).

Coracopsis nigra (part.), Wagl. Mon. Psitt. p. 680 (1832); G. R. Gr. Gen. B. ii. p. 407, n. 2 (partim) (1846); Bp. Consp. Av. i. p. 7 (1850); G. R. Gr. List Psitt. Erit. Mus. p. 2 (1859); Hartl. Journ. f. Orn. 1860, p. 107; id. Orn. Beitr. Faun. Madag. p. 58 (1861); Roch & E. Newt. Ibis, 1863, p. 165; Selat. P. Z. S. 1863, p. 164; E. Newt. Ibis, 1863, p. 452; Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xx (1863); Grandid. Rev. et Mag. de Zool. 1867, p. 389; Sousa, Mus. Nac. Lisboa, Psittaci, p. 22 (1869); Sundev. Meth. nat. Av. disp. Tent. p. 70 (1872); Bartl. P. Z. S. 1875, p. 67; Milne-Edw. et Grand. Hist. Madag., Ois. i. p. 6, Atl. pls. iii., iv., vi. (1876); Hartl. Vög. Madag. p. 227 (1877); Oust. Bull. Soc. Philom. (7) ii. p. 165 (1878); Forbes, Ibis, 1879, p. 305; Rehnw. Journ. f. Orn. 1881, p. 261 (Consp. Psitt. p. 149); id. Vogelbild. text to Taf. vii. f. 8 (1883); Sclat. List Vert. An. 8th ed. p. 336 (1883); Milne-Edw. et Oust. Nouv. Arch. Mus. (2) vi. p. 229 (1884); Tristr. Cat. Coll. B. p. 78 (1889); Sibree, Madag. Orn. pp. 13, 21 (1889); id. Ibis, 1891, pp. 212, 214.
Vigorsia niger, Sw. Class. B. ii. p. 304 (1837).

Coracopsis niger, Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 245; Souancé, Rev. et Mag. de Zool. 1856, p. 223; Bp. Naumannia, 1856, Consp. Psitt. n. 256; A. & E. Newt. Ibis, 1876, p. 285 (note). Vasa nigra, Schleg. Dierent. p. 71 (1864). Vaza nigra, G. R. Gr. Hand-list, ii. p. 159, n. 8263 (1870) \*.

Adult. Exactly like C. vasa, only much smaller; naked skin round the eyes rose-colour: bill black after the moult, becomes whitish later on; irides brown; feet blackish. Total length 15.6 inches, wing 1.3, tail 6.5, bill 1.08, tarsus 0.68.

Female. Smaller. Hab. Madagascar.

a. Ad. st. Madagascar Massena Coll. Shelley Coll. b, c. Ad. sk. Madagascar. Shelley Coll. Rev. W. D. Cowan d. Ad. sk. Central Madagascar. e. ♂ ad. sk. Ankafana, Madagascar, [C.]. March. Madagascar, July (W. Tweeddale Coll. f. Ad. sk. D. Cowan). Rev. W. D. Cowan g. Ad. sk. Madagascar. [C.]. Purchased. h. Ad. sk. Madagascar.

## 3. Coracopsis comorensis.

Coracopsis comorensis, Peters, Sitzb. der Berl. Akad. der Wissensch. 1854, p. 371; Licht. Nomencl. Av. p. 71 (1854); Hartl. Journ. f. Orn. 1830, p. 107; id. Orn. Beitr. Faun. Madag. p. 59 (1861); Sclat. 1809, p. 161; u. Orn. Bett. Fatat. Maaag. p. 39 (1801); Sclat. Ibis, 1864, pp. 295, 300; Sclat. P. Z. S. 1873, p. 474; Hartl. Fög. Madag. p. 230 (1877); E. Newt. P. Z. S. 1877, pp. 296, 302; Oust. Bull. Soc. Philom. (7) ii. p. 165 (1878); Shelley, P. Z. S. 1879, p. 674; Rehnw. Journ. f. Orn. 1881, p. 261 (Consp. Psitt. p. 149); id. Vogelbild. Nachtr. 70 (1883); Milne-Edw. et Oust. New Arch. May. (2), p. 226 (1889) Nouv. Arch. Mus. (2) x. p. 226 (1889).

Coracopsis comarensis, Bp. Naumannia, 1856, Consp. Psitt. n. 258; G. R. Gr. List Psitt. Brit. Mus. p. 3 (1859).

Psittacus comorensis, Finsch, Papag. ii. p. 304 (1868); Gieb. Thes. Orn. iii. p. 335 (1877).

Psittacus obscurus, part., Schleg. et Poll. Rech. Faun. Madag. p. 157

(1868).

Vaza comorensis, G. R. Gr. Hand-list, ii. p. 160, n. 8266 (1870).

Adult. Very much like C. vasa and about the same size, but the general brown colour paler, and the grey colour of the wings and tail less bluish and more brownish; under tail-coverts not grey but light brown, like the rest of the underparts: irides brown; bill and cere brown; feet blackish brown. Total length 19 inches, wing 11.5, tail 8.5, bill 1.3, tarsus 0.9.

<sup>\*</sup> It seems that the following quotations also refer to Coracopsis nigra:

Psittacus fuscus, Briss. Orn. iv. p. 314 (1760); Gm. S. N. i. p. 333, n. 99 (1788); Lath. Ind. Orn. i. p. 111, n. 88 (1790); Bechst. Kurze Uebers, p. 90 (1812); Wagl. Mon. Psitt. p. 739 (1832) (av. dub.).
Perroquet brun, Buff. Hist. Nat. Ois. vi. p. 121 (1779).
Brown Parrot, Lath. Syn. i. p. 266 (1781).

Ash-brown Parrot, Lath. Gen. Hist. ii. p. 214 (1822).

Female. Smaller. Hab. Comoro Islands.

a. Ad. sk. Anjuan Island. Purchased. Anjuan Island (Kirk). Anjuan Island (Kirk). Lord Russell [P.]. b. Ad. sk. Shelley Coll. c. Ad. sk. Grand Comoro (Kirk). Shelley Coll. d, e. Ad. sk.

## 4. Coracopsis barklyi.

Coracopsis barklyi, E. Newt: P. Z. S. 1867, p. 346, pl. xxii.; id. Ibis, 1867, pp. 341, 359; Sclat. P. Z. S. 1867, p. 473, 1871, p. 36, 1874, p. 496; Garvod, P. Z. S. 1874, p. 587; Sclat. P. Z. S. 1875, p. 62; A. & E. Newt. Ibis, 1876, pp. 282, 288; Oust. Bull. Soc. Philom. (7) i. p. 101 (1877); Hartl. Vög. Madag. p. 231 (1877); Oust. Bull. Soc. Philom. (7) ii. p. 164 (1878); Sclat. P. Z. S. 1879, p. 300; Philom. (7) ii. p. 164 (1878); Sclat. P. Z. S. 1879, p. 300; Philom. (7) ii. p. 164 (1878); Sclat. P. Z. S. 1879, p. 300; Philom. (7) ii. p. 164 (1878); Sclat. P. Z. S. 1879, p. 300; Philom. (8) ii. d. Vogil. Rchnw. Journ. f. Orn. 1881, p. 261 (Consp. Psitt. p. 149); id. Vogelbild. Nachtr. 70 (1883); Sclat. List Vert. An. 8th ed. p. 336 (1883);

Milne-Edw. et Oust. Nouv. Arch. Mus. (2) x. p. 229 (1889). Psittacus barklyi, Finsch, Papag. ii. 2, p. 954 (1868); Schleg. et Poll. Rech. Faun. Madag. p. 157 (1868); Gieb. Thes. Orn. iii.

p. 333 (1877).

Vaza barkleyi, G. R. Gr. Hand-list, ii. p. 160, n. 8267 (1870). Coracopsis barkleyi, Tristr. Cat. Coll. B. p. 78 (1890).

Adult. Like C. comorensis in colouring, but much smaller; pale brown; pileum with obsolete paler spots; primaries greyish on their outer webs: bill horny brownish; feet black. Total length about 12 inches, wing 8, tail 5.3, bill 0.85, tarsus 0.65.

Hab. Praslin, Seychelles Islands.

a, b. ♂♀ ad. sk. Seychelles (E. Newton). Shelley Coll. c. Ad. sk. Seychelles. Shelley Coll. d. Ad. sk. Sevchelles. Tweeddale Coll. Sevchelles Tristram Coll. e. Ad. sk. Praslin, (Warry). Praslin, Sevchelles. Zool. Soc. Coll. f. Ad. sk.

(A typical specimen; mentioned in the original description.)

# 5. Coracopsis sibilans.

? Coracopsis barklyi, E. Newt. P. Z. S. 1877, pp. 296, 302 (Anjuan Island) (nec P. Z. S. 1867, p. 346, pl. xxii.); Shelley, P. Z. S. 1879, p. 675, n. 6 (Grand Comoro and Anjuan).

Coracopsis sibilans, Milne-Edw. et Oust. Compt. Rend. ci. p. 220 (1885); iid. Ann. Sc. Nat., Zool. ser. vii. t. ii. art. n. 5, p. 214 (1887); iid. Nour. Arch. Mus. (2) x. p. 227 (1889).

Very much like C. barklyi, from which it can only be distinguished by the browner colour of the wings and especially of the primaries, which want the greyish tinge peculiar to the other Total length about 12 inches, wing 7.6 to 6.9, tail 5.5, bill 0.90 to 0.75, tarsus 0.65.

Hab. Grand Comoro and Anjuan Island.

I have compared with the following specimens two others preserved in the Museum of Cambridge. I cannot confirm the other distinctive characters mentioned in the original descriptions of this species, such as the wing being longer than in C. barklyi and the ear-coverts darker.

a. Ad. sk. b. Ad. sk. Grand Comoro (Kirk). Anjuan Island (Kirk). Shelley Coll. Shelley Coll.

#### 29. DASYPTILUS.

Type.

Psittrichas, Less. Bull. Univ. Sc. Nat. xxv. p. 241 D. pesqueti. D. pesqueti. Cf. Meyer, Mitth. zool. Mus. Dresd. 1875, p. 14; Garrod, P. Z. S. 1876, pp. 691, 692.

Range. Confined to New Guinea.

## 1. Dasyptilus pesqueti.

Psittacus pecquetii, Less. Bull. des Sc. Nat. xxv. p. 241 (Juin 1831); Bourj. Perr. pl. 67 (1837-38).

Psittacus pesquetii, Less. Ill. de Zool. pl. 1 (1831); Less. Descr.

Mamm. et Ois. p. 199 (1847).

Banksianus fulgidus, Less. Tr. d'Orn. p. 181 (1831) (type examined); Pucher. Rev. et Mag. de Zool. 1853, p. 156; Hartl. Journ. f. Orn. 1855, p. 422; Salvad. Ann. Mus. Civ. Gen. xii. p. 317 (1878). Dasyptilus pecquetii, Wagl. Mon. Psitt. pp. 502, 681, 735 (1832);

G. R. Gr. Gen. B. ii. p. 427 (1846); Bp. Consp. i. p. 8 (1850); Le G. R. Gr. Gen. B. h. p. 427 (1840); Bp. Consp. I. p. 8 (1850); Bp. Rev. et May. de Maout, Hist. Nat. Ois. p. 104, pl. 2 (1853); Bp. Rev. et May. de Zool. 1854, p. 155, n. 248; id. Naumannia, 1856, Consp. Psitt. n. 260; G. R. Gr. Cat. B. New Guin. pp. 43, 60 (1859); id. List Psitt. Brit. Mus. p. 100 (1859); Sclat. P. Z. S. 1860, p. 227; Rosenb. Journ. f. Orn. 1862, p. 65; id. Nat. Tijdschr. xxv. pp. 146, 117 (1862); id. Journ. f. Orn. 1864, p. 116, p. 38; Popper Vet. 147 (1863); id. Journ. f. Orn. 1864, p. 116, n. 38; Bernst. Nat. Tijdschr. Ned. Ind. xxvii. p. 297 (1864); id. Ned. Tijdschr. Dierk. ii. p. 327 (1865); G. R. Gr. Hand-list, ii. p. 159, n. 8260 (1870); Salvad. Atti R. Acc. Sc. Tor. ix. p. 630 (1874); D'Alb. Nature, 1876, xv. p. 165; Meyer, Mitth. z. Mus. Dresd. i. p. 14 (1875); Rowley, Orn. Misc. i. p. 32 (1875); Garrod, P. Z. S. 1876, p. 691; Meyer, Vögel-Skelett. i. Taf. i. (1879); Tristr. Cat. Coll. B. p. 78 (1889). Dasyptilus pequeti, Jard. Nat. Libr., Parrots, p. 140, pl. xvii. (1836); Wall. P. Z. S. 1864, pp. 287, 294.

Wall, P. Z. S. 1864, pp. 287, 294.
Psittrichas pesqueti, Less. Compl. de Buff. ix. p. 199, pl. 25, f. 2 (1837); id. op. eit. 2nd ed. Ois. p. 603, pl. —, f. 2 (1838).
Calyptorhynchus fulgidus, Gray, Gen. B. ii. p. 426, n. 11 (1845).
Dasyptilus fulgidus, Bp. Rev. et Mag. de Zool. 1854, p. 157; id. Naumannia, 1856, Consp. Psitt. n. 261; G. R. Gr. List Psitt. Brit. Mus. p. 100 (1859); Finsch, Papag. ii. p. 323 (1868); Salvad. Ann. Mus. Civ. Gen. xii. p. 317 (1878).
Dasyptilus pesqueti, G. R. Gr. P. Z. S. 1858, p. 195, 1861, p. 437; Finsch, Papag. ii. pp. 320, 955 (1868); Gieb. Thes. Orn. ii. p. 18 (1874); Meyer, Sitzb. Isis Dresd. 1873, p. 76; Beccari, Ann. Mus. Civ. Gen. vii. p. 714 (1875); id. Ibis, 1876, p. 252; Salvad. Ann. Mus. Civ. Gen. x. p. 31, n. 54, p. 121 (1877), xii. p. 317 olt. xx. VOL. XX.

(1878); D'Alb. Sydn. Mail, 1877, p. 248; id. Ann. Mus. Civ. Gen. (1878); D'Alo. Sydu. Mall, 1877, p. 248; id. Ann. Mus. Civ. Gen. x. pp. 8, 19 (1877); id. Ibis, 1877, p. 365; D'Alb. & Salvad. Ann. Mus. Civ. Gen. xiv. p. 36 (1879); Salvad. Orn. Pap. e Mol. i. p. 216 (1880); Sharpe, Journ. Linn. Soc., Zoology, xvi. p. 426 (1882); Salvad. Orn. Pap. e Mol. iii. p. 518 (1882); Rchnw. Vogelbild. t. xviii. f. 2 (1878-83); Sharpe, Gould's B. New Guin. pt. xiv. pl. 1 (1883); Guillem. P. Z. S. 1885, p. 621; Finsch u. Meyer, Zeitschr. f. yes. Orn. 1886, p. 5; Salvad. Mem. R. Ac. Sc. Tors soc. 2 xl. n. 28 (1882) Tor. ser. 2, xl. p. 38 (1889). Nestor pecquetii, Schleg. Journ. f. Orn. 1861, p. 377; id. Mus. P.-B.

Psittaci, p. 157 (1864); id. Mus. P.-B. Psittaci, Revue, p. 70

(1874).

Dasyptilus pescqueti, Finsch, Neu-Guin. p. 157 (1865). Microglossum pecqueti, Rosenb. Zool. Gart. 1878, p. 347.

Dasyptilus pequetti, Mosel. Not. by a Natur. on the Chall. pp. 392, 479 (1879)\*.

Nestor pesqueti, Rchnw. Journ. f. Orn. 1831, p. 22 (Consp. Psitt. p. 22).

Adult. Black, the feathers of the breast edged with brownish grey; abdomen, sides, upper and under tail-coverts, median upper wing-coverts, the outer web of the secondaries, and under wingcoverts red; forehead, sides of the head, and throat nearly naked, with few hair-like feathers; black feathers of the pileum and of the nape narrow, pointed; a red band on each side of the occiput; tail black: bill and feet black; iris maroon. Total length from 21 to 20 inches, wing 12, tail 7.5, bill 0.65, tarsus 1.

Young. Besides being smaller, has the red colour less bright and

less extended on the wings.

Hab. New Guinea.

a. Ad. st. Purchased. b. ♂ ad. sk. Arfak Mts., New Guinea. Gould Coll. c. Q imm. sk. Gould Coll. Has, N.W. New Guinea. d. Ad. sk. S.E. New Guinea (A. Goldie). Tweeddale Coll. e. Ad. sk. Astrolabe Mts. (A. Goldie). Tweeddale Coll.

# Subfamily V. PALÆORNITHINÆ.

Bill moderate, or very strong, deeper than long (in Loriculus long and thin); the horny covering of the bill smooth, mostly red, sometimes black; culmen rounded, smooth or with a longitudinal groove; gonys flattened or rounded, smooth or with a feeble median ridge or keel; cere narrow, equally broad, surrounding the whole base of the bill, generally partly feathered; nostrils hidden or exposed; tail

<sup>\* &</sup>quot;I saw on the main island a scarlet and black Parrot or Cockatoo of some kind, which flew out of some high trees on the sea shore, screaming loudly, like a Cockatoo. The bird was wary, and I could not get a shot at it. It reminded me at the time of the rare Dasyptilus pequetti of New Guinea; it was of about that size." (MOSELEY, 'Notes by a Naturalist on the Challenger,' p. 479, 1879.) Hab. Admiralty Islands.

sometimes very long and graduated, sometimes short and square, or wedge-shaped; wing generally with the second and third quills the longest. Sexes mostly different.

Range. Australian, Oriental, and Ethiopian Regions.

# Key to the Genera.

a. Bill thick, deeper than long.
a'. Gonys with a distinct ridge or keel along
the middle.
a". Tail long or moderate.
a'''. Plumage with no black bars.
a <sup>4</sup> . Tail moderate, square or nearly so.
a <sup>5</sup> . Central tail-feathers normal.
a <sup>6</sup> . Upper mandible notched; nos-
trils concealed; size large:
males green, females red 30. Eclectus, p. 388.
b. Upper mandible not notched;
nostrils exposed; size mode-
rate; plumage green; head
mostly red in males, brown in [p. 399.
females
b. Central tail-feathers spatulated 32. Prioniturus,
$b^4$ . Tail not square. [p. 414.
$c^{5}$ . Tail moderate.
c <sup>6</sup> , Tail rounded; bill moderate, [p. 421.
red; nostrils concealed 33. Mascarinus*,
$d^{8}$ . Tail nearly cuneated; bill very
deep and powerful, with the
anterior surface of the lower [p. 422.
mandible very broad 34. TANYGNATHUS,
d <sup>5</sup> . Tail long and graduated.
e <sup>6</sup> . Tail-feathers narrow, especially
the two central ones.
a <sup>7</sup> . Bill stronger, with the upper
mandible notched; frequently [p. 433.
a collar round the hind neck. 35. PALÆORNIS†,
b. Bill weaker, with the upper [p. 477.
mandible not notched 36. POLYTELIS,

<sup>\*</sup> I have followed Mr. Forbes (Ibis, 1879, p. 307) in placing Mascarinus near Tanygnathus.

<sup>†</sup> The following extinct genus finds its place next to Palæornis:-

Necropsittacus.	Type.
Necropsittacus, A. Milne-Edw. Ann. d. Sc. Nat. (5) xix.	Type.
Art. 3, p. 18 (1874)	N. rodericanus.

#### NECROPSITTACUS RODERICANUS.

Psittacus rodericanus, A. Milne-Edw. Ann. Sc. Nat. (5) viii. pp. 151–155, pl. 7. ff. 1, 2 (tip of the upper mandible) (1867); id. Compt. Rend. Ac. Sc. Paris, lxv. pp. 1121–1125 (1867); id. Ann. Sc. Nat. (5) xix. Art. 3, pp. 16–18, pl. 13. ff. 2, 2 a, 2 b (upper mandible), 2 c, 2 d, 2 e (under mandible) (1874).

# Tail-feathers very broad

$f^{\mathfrak{g}}$ . Tail-feathers very broad. $c^{7}$ . Tail-feathers almost equally long	481.
a <sup>8</sup> . Bill weaker, with the upper mandible notched, and more or less red, especially at the base 38. Approximity Bill stronger, deeper than	p. 485. us,
long, of a black horn-colour, with the upper mandible not notched	p. 493. PSIS,
or less banded; tail moderate; bill not notched	p. 498. LA,
the wing.  c'''. Bill moderately swollen on the sides;  upper mandible notched 41. Psittinus,	p. 500.
d'''. Bill much swollen, nearly globose;  upper mandible not notched, but deeply sinuated along the edges 42. Вольорыть b'. No distinct ridge or keel along the middle	p. 503. racus,
	p. 506.
long and very little curved; gonys much slanting upwards and nearly straight; under	p. 515.
30. ECLECTUS.	pe.
Mascarinus (part.), Less. Tr. d'Orn. p. 188 (1831). Eclectus, Wagl. Mon. Psitt. p. 495 (1832) E. pect Psittacodis, Wagl. ibid. (part.) (1832); Bp. Consp. Gen.	oralis.
Av. i. p. 4 (1850) E. pect Polychlorus, Sclat. P. Z. S. 1857, p. 226 E. pect Muscarinus (errore), G. R. Gr. Hand-list, ii. p. 157	oralis.
(1870) E. pect	
Range. The Moluccas, Tenimber Islands, and the Papuan Is	lands.
Eclectus rodericanus, A. Milne-Edw. Ann. Sc. Nat. (5) vii. p. 154 (xix. Art. 3, p. 17 (1874).	, ,
Necropsittacus rodericanus, A. Newt. P. Z. S. 1875, p. 41; A. & E. Bis, 1876, pp. 287, 289; Günth, & E. Newt. Phil. Trans. vol. 168, pl. xlii. ff. K-N (1879); E. Newt. Trans. Norf. & Norw. Nat. p. 550 (1888)	р. 429,

p. 550 (1888.)

First known from a portion of the upper mandible, and then from a nearly complete skull and other bones. From a manuscript found in the Archives of the Ministère de la Marine at Paris, it appears that this Parrot was still living in Rodriguez at a not very distant date; it was larger than a Pigeon, and it had

in Rodriguez at a not very distant date; it was larger than a Pigeon, and it had the tail very long, and the head and bill very large.

The affinities of this form to Palæornis, first shown by Prof. A. Milne-Edwards on what seemed to be slender evidence, were fully confirmed on the examination by Dr. Günther and Sir Edward Newton of further remains subsequently obtained from the caves of Rodriguez, where they occur with those of Pezophaps.

# Key to the Species.

a. Green: males. a'. Sides of the body red. a". Larger: total length from 18.6 to 16.3 inches. a". Green colour purer; tail generally less blue ..... ..... pectoralis, p. 389. b"". Green colour with a yellowish tinge; lateral tail-feathers generally much more green colour quite pure; lateral tailfeathers with very little blue colour, which is nearly confined to the external web of the outer tail-feathers. c'''. Tip of the tail slightly yellowish . . . . . cardinalis, p. 394. d"'. Tail with a well-defined bright yellow band at the tip ..... riedeli, p. 396. b'. Sides of the body green, with no red patches . westermanni, p. 397. b. Red: females. c'. A band across the nape, covering also the upper back, lower breast, and abdomen, blue or purple. c". A blue ring round the eyes; band on the upper back and abdomen bright blue . . . . pectoralis, p. 389. d". No blue ring round the eyes; band on the upper back and abdomen purple. e". Under tail-coverts red, the longest more or less tinged with yellow ...... cardinalis, p. 394.

f'''. Under tail-coverts bright yellow ..... roratus, p. 393. d'. No blue or purple band on the nape and upper back; abdomen red, with no blue or purple colour. e". Smaller: under tail-coverts and a broad band at the tip of the tail-feathers yellow. riedeli, p. 396. f". Larger: under tail-coverts red; no yellow

# 1. Eclectus pectoralis.

Green and red Parrot from China, Edw. Glean. v. pl. 231 (1758); Seligm, Ausl. Vög. vii. pl. 14 (1770).

band at the tip of the tail-feathers ..... cornelia, p. 398.

Psittacus sinensis, Briss. Orn. iv. p. 291 (1760) (ex Sina et Amboina!); Gm. S. N. i. p. 337, n. 109 (1788); Lath. Ind. Orn. i. p. 117 (1790); Bechst. Kurze Uebers. p. 94 (1811); Kuhl, Consp. Psitt. p. 84 (1820); Vieill. Enc. Méth. p. 1369 (1823); Less. Voy. Coq., Zool. i. p. 342 (1826), ii. p. 627 (1828); Voigt, Cuv. Uebers. p. 743 (1831); Temm. Tabl. Meth. p. 59 (1839).

Perroquet de la Chine, D'Aubent. Pl. Enl. 514.

Grand Perroquet verd de la Nouvelle Guinée, Sonner. Voy. à la

Nouv. Guin. p. 174, pl. 108 (1776).
Psittacus pectoralis, P. L. S. Müll. S. N. Suppl. p. 78, n. 58 (1776); Cass. Pr. Ac. Nat. Sc. Philad. 1864, p. 240.

Psittacus aurantius, P. L. S. Müll. op. cit. p. 80, n. 64; Cass. l. c.

Perroquet vert, Buff. Hist. Nat. Ois. vi. p. 116 (1779).

New-Guinea green Parrot, Lath. Syn. i. p. 296 (1781); id. Gen. *Hist.* ii. p. 233 (1822).

Psittacus polychlorus, Scop. Del. Flor. et Faun. Insubr. p. 87, n. 27 (1786) (ex Sonnerat); Finsch, Neu-Guin. p. 158 (partim) (1865);

Rosenb, Reist, naar Geelvinkb, p. 83 (1875).

 Psittacus magnus, Gm. S. N. i. p. 344, n. 122 (1788) (ex Sonnerat);
 Bechst. Kurze Uebers. p. 100 (1811); Vicill. Enc. Meth. p. 1366 (1823); S. Müll. Verh. Land- en Volkenk. pp. 22, 167 (1839-1844).

Psittacus viridis, Lath. Ind. Orn. i. p. 125, n. 123 (1790) (ex Gmelin). Le Perroquet à flancs rouges, Levaill. Perr. pl. 132 (1805).

Psittacus lateralis, Shuw, Gen. Zool. viii. p. 490 (1811).

Green and red Chinese Parret, Lath. Gen. Hist. ii. p. 233 (1822). Psittacus grandis, Less. (ncc Gm.) Voy. Coq., Zool. i. p. 342 (1826);

S. Müll. Verh. Land- en Volkenk. p. 22 (1839–1844).

Psittacus puniceus, part., Less. Voy. Coq., Zool. i. 2, p. 627 (1828).

Mascarinus prasinus, Less. Tr. d'Orn. p. 188 (1831).

Eclectus linnæi, Wayl. Mon. Psitt. p. 571, t. xxi. (1832); G. R. Gr. Gen. B. ii. p. 418, n. 1 (1845); Bp. Naumannia, 1856, Consp. Psitt. n. 243; Souancé, Rev. et Mag. de Zool. 1856, p. 219; Wall. Ann. & Mag. N. H. (2) xx. p. 473 (1857); G. R. Gr. P. Z. S. 1858, pp. 182, 194, 1859, p. 158; id. Cat. B. New Guin. pp. 40, 59 (1859); id. List Psitt. Brit. Mus. p. 65 (1859); Wall. Ibis, 1861, p. 286; Cass. Pr. Ac. Sc. Philad. 1862, p. 319; Sclat. Ibis, 1863, p. 229; Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xvii (1863); Wall. P. Z. S. 1864, p. 286; Bernst. Nat. Tijdschr. Ned. Ind. xxvii. Reis naar Zuidoostereil. pp. 48, 80 (1867); Finsch, Papag. ii. p. 346 (1868); G. R. Gr. Hand-list, ii. p. 157, n. 8239 (1870); id. Ann. § Mag. N. H. (4) v. p. 329 (1870); Meyer, Zoolog. Gart. 1874, p. 161; Schleg. Mus. P.-B. Psittaci, Revue, p. 11 (1874); Rosenb. Reist. naar Geelvinkb. pp. 36, 55, 113 (1875); id. Zoolog. Gart. 1878, p. 345.

Psittacodis magnus, Wayl. Mon. Psitt. p. 575 (1832); Bp. Consp. i. p. 4 (1850); id. P. Z. S. 1850, p. 26; id. Rev. et May. de Zool. 1854, p. 155, n. 232; id. Naumannia, 1856, Consp. Psitt. n. 239; Souancé, Rev. et Mag. de Zool. 1856, p. 218; Wall. Ann. & Mag. N. H. (2) xx. p. 473 (1852); Rosenb. Journ. f. Orn. 1862, pp. 62, 64, 65, 68; id. Nat. Tijdschv. Ned. Ind. xxv. pp. 143, 144,

145, 148, 223, n. 22 (1863).

Psittacus linnæi, Hahn, Orn. Atlas, Papag. t. 77 (1836); Finsch,

Neu-Guin. p. 157 (1865).

Psittacus grandis, var., S. Müll. Verh. Land- en Volkenk. pp. 107,

108 (1839–1844).

 Eclectus polychlorus, G. R. Gr. Gen B. ii. p. 418, n. 4 (1843); id.
 Cat. B. New Guin. pp. 40, 59 (1859); id. Cat. B. Trop. Isl. p. 34 (1859); id. List Psitt. Brit. Mus. p. 66 (1859); Cass. Pr. Ac. Sc. Philad. 1862, p. 319; Sclat. Ibis, 1863, p. 229; Rosenb. Nat. Tijdschr. Ned. Ind. xxv. p. 226, n. 21 (1863); id. Journ. f. Orn. 1864, p. 114, n. 21; Wall. P.Z. S. 1864, p. 286 (partim); Schleg. Mus. P.-B. Psittaci, p. 41 (partim) (1864); id. Ned. Tijdschr. Dierk. iii. p. 332 (1865); Rosenb. Keis naar Zuidoostereil. pp. 48, 80 (1867); Finsch, Papag. ii. p. 333 (1868); Meyer, Verh. z.-b. Gesellsch. Wien, 1874, p. 179; id. Zool. Gart. 1874, p. 161; Schley. Mus. P.-B. Psittaci, Revue, pp. 14, 15 (1874); Gieb. Thes. Orn. ii. p. 76 (1875): Meyer, Mitth. zool. Mus. Dresd. i. p. 11 (1875); id. Sitzb. Isis Dresd. 1875, p. 77; Salvad. Ann. Mus. Civ. Gen. vii. p. 756 (1875); Salvad. e D'Alb. Ann. Mus. Civ. Gen.

vii. p. 811 (1875); Rosenb. Reist. naar Geelvinkb. pp. 36, 55, 113 (1875); Salvad. Ann. Mus. Civ. Gen. ix. p. 11 (1876); Ramsay, Pr. Linn. Soc. N. S. W. i. p. 394 (1876); Cab. u. Rehnw. Journ. f. Orn. 1876, p. 324; Salvad. Ann. Mus. Civ. Gen. x. p. 31, n. 49, p. 121 (1877); Sclat. P. Z. S. 1877, p. 106; Meyer, P. Z. S. 1877, p. 800, pl. 79; Forbes, Ibis, 1877, p. 282 (partim); Salvad. Ibis, 1877, p. 475; id. P. Z. S. 1878, p. 92; Sclat. P. Z. S. 1878, pp. 289, 290; Sharpé, Journ. Linn. Soc., Zool. xiii. p. 491, n. 15 (1878); Meyer, Orn. Centralblatt. 1878, pp. 119, 137; Gould. B. New Guin. pt. viii. pl. 4 (1878); Rosenb. Zool. Gart. 1878, p. 345 (partim); Meyer, Zool. Gart. 1878, p. 377; Rosenb. Malay. Archip. p. 371 (1878–79); Ramsay, Pr. Linn. Soc. N. S. W. iii. p. 253 (1878–79), iv. p. 69 (1879); Finsch, P. Z. S. 1879, p. 12; D'Alb. e Salvad, Ann. Mus, Civ. Gen. xiv. p. 36 (1879); Salvad. Ann. Mus. Civ. Gen. xiv. p. 639 (1879); Rehnw. Vogelbild. t. xi. ff. 3, 4 (1878-83); Salvad. Voy. Chall., Birds, p. 75 (1881); Meyer, Zeitschr. f. wissensch. Zool. xxxvii. p. 146 and following (1882); Ramsay, Pr. Linn. Soc. N. S. W. vii. p. 33 (1882); Tristr. Ibis, 1882, p. 143; Musschenbr. Dagboek, p. 256 (partim) (1883); Finsch, Vög. d. Südsee, p. 17 (1884); Meyer, Zeitschr. f. ges. Orn. i. p. 373 (1884); Grant, P. Z. S. 1887, p. 329, 1888, p. 189; Meyer, Vogel-Skelett. t. x., xliv. (1878-89).

Eclectus puniceus, Bp. P. Z. S. 1849. p. 142 (syn. emend.); id. Rev. et Mag. de Zool. 1854, p. 155, n. 235; Rosenb. Nat. Tijdschr. Ned. Ind. xxv. pp. 143, 145, 226, n. 20 (1863); id. Journ. f. Orn. 1864,

p. 114, n. 20.

Eos puniceus, Licht. Nomencl. Av. p. 71 (1854).

Polychlorus magnus, Sclat. P. Z. S. 1857, p. 226, 1860, p. 227 (Arrou Isl.); Marie, Act. Soc. Linn. Bord. xxvii. p. 327 (1870) (Nouvelle Caledonie!); Oust. Bull. Soc. Philom. Paris, 1879, p. 218. Polychlorus grandis, Sclat. (nec Gm.) Journ. Pr. Linn. Soc. ii. p. 165, n. 113 (1858).

Eclectus polychlorus, var. aruensis, G. R. Gr. P. Z. S. 1858, p. 183; id. Cat. B. New Guin. pp. 40, 59 (1859); Bernst. Nat. Tijdschr. Ned. Ind. xxvii. p. 297 (1864).

Psittacodis polychloros, G. R. Gr. P. Z. S. 1858, p. 194.

Mascarinus polychlorus, Horsf. & Moore, Cat. B. Mus. E. I. Comp. ii. p. 625 (1858); Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xvi (1863).

Eclectus ceylonensis, G. R. Gr. (nec Bodd.) Cat. B. Trop. Isl. p. 34

(1859).

Eclectus cardinalis, Wall. (nec Bodd.) Ibis, 1859, p. 210; Sclat. P. Z. S. 1860, p. 227; Rosenb. Journ. f. Orn. 1862, pp. 63, 64, 65; id. Malay. Archip. p. 37 (1878-79); De Vis, Ann. Rep. Brit. New Guin. p. 58 (1890); id. Colonial Papers, no. 103, p. 108 (1890); id. Ibis, 1891, p. 29 (Normanby Island).

Psittacodis magna, Rosenb. Journ. f. Orn. 1864, p. 114, n. 22.

Muscarinus (sic) polychlorus, G. R. Gr. Hand-list, ii. p. 158, n. 8243 (1870).

Muscarinus (sic) intermedius, part., G. R. Gr. Hand-list, ii. p. 158, n. 8245 (1870).

Electus (sic) intermedius, G. R. Gr. (nec Bp.) Ann. & Mag. N. H. (4) v. p. 329 (1870).

Lorius sinensis, Gulliv. P. Z. S. 1875, p. 489.

Eclectus pectoralis, Salvad. Orn. Pap. e Mol. i. p. 197 (1880); Rchnw. Journ. f. Orn. 1881, p. 252 (Consp. Psitt. p. 140); id. Vogelbild. Bericht. (1883); Sclat. P. Z. S. 1883, p. 196; Meyer, Sitz. u. Abh. Gesellsch. Isis, 1884, Abh. i. p. 16; Nehrk. Journ. f.

Orn. 1885, p. 31; Guillem. P. Z. S. 1885, p. 620; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 165 (1889); Tristr. Cat. Coll. B. p. 76 (1889).

? Éclectus grandis, Bernst. (nec Gm.) Dayboek, p. 144 (1883).
Eclectus intermedius, part., Musschenbr. in Bernst. Dayboek, p. 256 (1883).

Adult male. Green; sides, under wing-coverts, and axillaries red; edge of the wing blue; primaries and their coverts dark blue, with the outer web edged with green; secondaries green on the outer web, dark blue at the tip and on the inner web; the innermost remiges near the scapulars green; tail tipped with yellowish, middle tail-feathers green, the others blue with the outer web more or less green; the external web of the outer tail-feather blue, with no green colour, or scarcely any; tail and quills underneath black: "iris red; upper mandible vermilion, under mandible black; feet black" (D'Albertis). Total length 18·6 to 16·5 inches, wing 10·8 to 9·8, tail 5·7 to 4·9, bill 1·8 to 1·6, tarsus 0·9 to 0·87.

Adult female. Head, neck, and upper breast bright red; a narrow ring of feathers round the eyes, a band across the upper back, lower breast, abdomen, edge of the wing, and under wing-coverts blue, sometimes with a purplish tinge; back, uropygium, upper tail-coverts, wing-coverts, and secondaries blood-red; primaries and their coverts blue, edged with green on the outer web; tip and part of the inner web of the outermost secondaries blue, the innermost secondaries greenish on the inner web; tail above blood-red with the tip lighter red, underneath dusky towards the base, and with golden reflexions in the middle: "iris pale yellow; bill and feet black" (D'Albertis). Total length 15.7 to 14 inches, wing 10.4 to 9.1, tail 4.9 to 4.3, bill 1.7 to 1.6, tarsus 0.9 to 0.87.

Hab. The Papuan Islands—New Guinea and Waigiou, Guebeh, Batanta, Salawatty. Mysol, on the west; Mafor, Mysori, Miosnom, in Geelvink Bay; Koohr, Ké Islands, and Aru Islands, on the south; Normanby Island, New Britain, New Hanover, New Ireland, and Solomon Islands on the east.

a. 2 ad. sk.

b. ♀ ad. st.
c. Ad. sk.
d. ♂ ad. sk.
e. ♀ ad. sk.
f. ♂ ad. sk.
g-l. ♂ ♀ ad. et
imm. sk.
m. ♂ ad. sk.
n, o. ♂ ♀ ad. sk.

p. Juv. sk.
 q. d ad. sk.
 r, s. Ad. et imm. sk.
 t. Ad. sk.

u, v. Ad. sk.

Dorey (A. R. Wallace). Dorey. Waigiou. Salawatty, July. Mysol. Aru Islands.

Wokan, Aru Islands.
Duke of York Island, Oct.
(Rev. G. Brown).
New Britain, March.
New Ireland.
St. George's Bay, Ysabel Isl.,
Sept.
Ysabel Island, Aug.

[Philippine Islands.]

Zoological Society's Coll. Gould Coll. Wallace Coll. Wallace Coll. Tweeddale Coll. Wallace Coll. Wallace Coll.

Challenger Exped. Tweeddale Coll.

Rev. G. Brown [C.].
C. L. Layard [C.].
J. Brenchley, Esq.
[P.].
J Brenchley, Esq.
[P.].
Purchased.

### 2. Eclectus roratus.

Purper roode Lori, Vosmaer, Mon. p. 10, t. 7 (1769).

Lory de la Nouvelle Guinée, D'Aubent. Pl. Enl. 683. Psittacus roratus, P. L. S. Müll. S. N. Suppl. p. 77 (1776); Cass. Pr. Ac. Sc. Philad. 1864, p. 240, n. 52.

Le grand Lori, Buff. Hist. Nat. Ois. vi. p. 135 (1879).

Grand Lory, Lath. Syn. i. p. 275 (1781); id. Gen. Hist. ii. p. 230 (1822).

Psittacus ceclanensis (sic), Bodd. Tabl. Pl. Enl. p. 42 (1783).

Psittacus grandis, Gm. S. N. i. p. 335, n. 102 (1788); Lath. Ind. Orn. i. p. 116 (with var. β) (1790); Shaw, Gen. Zool. viii. p. 133, pl. 80 (1811); Bechst. Kurze Uebers. p. 94 (1811); Kuhl, Consp. Psitt. p. 38 (syn. emend.) (1820); Vieill. Enc. Méth. p. 1378 (1823); Voigt, Cuv. Uebers. p. 734 (1831); Hahn, Orn. Atl., Papag. p. 88, t. 68 (1837); Temm. Tabl. Méth. p. 59 (1839); S. Müll. Verh. Land- en Volkenk. pp. 107, 108 (partim) (1839–44); Thienem. Fortpflanz. d. yes. Vög. p. 76 (1852); Dehne, Naumannia, 1854, p. 39; Finsch, Neu-Guin. p. 157 (partim) (1865).

Le Perroquet grand Lory, Levaill. Perr. pl. 126 (fig. bona), 127 (var.),

128 (var.) (1805).

Lorius grandis, Steph. Gen. Zool. xiv. p. 131 (1826); Hartl. Syst. Verz. Ges. Mus. p. 87 (1844).

Mascarinus puniceus, Less. (nec Gm.) Tr. d'Orn. p. 188 (1831). Eclectus grandis, Wagl. Mon. Psitt. p. 572 (1832); Selby, Nat. Libr., Parrots, p. 112 (1836); Bp. P. Z. S. 1849, p. 143; id. Rev. et Mag. de Zool. 1854, p. 155, n. 236; id. Naumannia, 1856, Consp. Psitt. Moore, Cat. B. Mus. E.I. Comp. ii. p. 624 (1858); G.R. Gr. P. Z. S. 1860, p. 357; Bernst. Nat. Tijdschr. Ned. Ind. xxvii. p. 295 (1864); Wall. P. Z. S. 1864, p. 286; Schleg. Mus. P.-B. Psittaci, p. 38 (1864); Finsch, Papag. ii. p. 340 (1868); Meyer, Zool. Gart. 1874, p. 161; Schleg. Mus. P.-B. Psittaci, Revue, p. 13 (1874); Gieb. Thes. Orn. ii. p. 74 (1875); Salvad. Ann. Mus. Civ. Gen. vii. p. 757, n. 6 (nec n. 3), et errata-corrige lin. 17, n. 2 (1875); Rosenb. Reist. naur Geelvinkb. p. 6 (1875); Forbes, Ibis, 1877, p. 282; Salvad. Ibis, 1877, p. 475; Rosenb. Zool. Gart. 1878, p. 345; Meyer, Zeitschr. f. wissensch. Zool. xxxvii. p. 156 and following (1882).

Eclectus ceylonensis, G. R. Gr. Gen. B. ii. p. 418, n. 2 (1845). Polychlorus magnus, Sclat. P. Z. S. 1860, pp. 226, 227 (partim). Eclectus polychloros, var., G. R. Gr. P. Z. S. 1860, p. 358. Psittacodis magnis, Rosenb. Journ. f. Orn. 1862, p. 62; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 141, 142 (1863).

Eclectus polychlorus, Bernst. (nec Scop.) Nut. Tijdschr. Ned. Ind. xxvii. p. 294 (1864); Wall. P. Z. S. 1864, p. 286 (partim); Schleg. Mus. P.-B. Psittaci, p. 40 (partim) (1864); Finsch, Papay. ii. p. 333 (partim) (1868); Meyer, Zool. Gart. 1874, p. 161 (partim); Schley. Mus. P.-B. Psittaci, Revue, p. 14 (partim) (1874); Rosenb. Reist. naar Geelvinkb. p. 6 (1875); id. Zool. Gart. 1878, p. 345 (partim); Musschenbr. in Bernst. Dayboek, p. 256 (partim)

Psittacus polychlorus, part., Finsch, Neu-Guin. p. 157 (1865).

Eclectus roratus, G. R. Gr. Hand-list, ii. p. 157, n. 8240 (1870); Salvad. P. Z. S. 1878, p. 78; id. Orn. Pap. e Mol. i. p. 206 (1880); Rehnw. Vogelbild. t. xxvii. f. 6 (Ω) (1878–83); id. Journ. f. Orn. 1881, pp. 252, 397 (Consp. Psitt. pp. 140, 229); Salvad. Voy. Chall., Birds, p. 59 (1881); Sclat. P. Z. S. 1883, p. 196; Meyer, Zeitschr.

f. gcs. Orn. i. p. 274, Taf. xvi. (pullus) (1884); Guillem. P. Z. S.
1885, p. 563; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 165 (1889);
Meyer, Ibis, 1890, p. 26, pl. i.

Muscarinus (sie) polychlorus, part., G. R. Gr. Hand-list, ii. p. 158,

n. 8243 (1870).

Eclectus cardinalis, Salvad. (nec Bodd.) Ann. Mus. Civ. Gen. vii. p. 757, n. 2 (nec n. 5) (1875).

### Variety.

Perroquet violet, Fermin. Descr. gén. de Surinam, ii. p. 175 (1769). Violet Lory, Lath. Syn. i. p. 220 (1781); id. Gen. Hist. ii. p. 135 (1822).

Psittacus janthinus, Gm. S. N. i. p. 319, n. 61 (1788). Psittacus guebiensis, var.  $\beta$ , Lath. Ind. Orn. i. p. 90 (1790).

Adult male. Scarcely different from the male of E. pectoralis; the green colour is less pure and has a slight tinge of yellow; the lateral tail-feathers are generally, but not always, more extensively tinged with blue: iris red; upper mandible red with yellowish tip, under mandible black; feet black. Total length 16.9 to 16.3 inches, wing 11.2 to 10.4, tail 6.3 to 5.9, bill 1.8 to 1.7, tarsus 0.98 to 0.91.

Adult female. Red, the head brighter; collar round the nape, covering the upper back, lower breast, and abdomen purple; the upper breast red, tinged with purple; under tail-coverts and a band at the tip of the tail bright yellow; primaries and their wing-coverts deep blue; secondaries red on the outer web, blue at the tip and on the inner web: the innermost secondaries, near the scapulars, entirely red; tail underneath golden red, towards the base dusky: iris yellow; bill and feet black. Total length 15·7 inches, wing 10, tail 5·5, bill 1·45, tarsus 0·92.

Hab. The Moluccas, where it is confined to the Halmahera group—Halmahera, Ternate, Tidore, March, Morty, Kaisa, Dam-

mar, Batchian, and Obi Islands.

a. Ad. sk. b, c, d. Ad. sk. Gilolo. Gilolo (A. R. Wallace). e. Ad. sk. f, g. ♂♀ad. sk. h. Ad. sk. Ternate. Kaisa Island. Batchian. *i*. Ad. sk. k. Q ad. sk. Batchian (A. R. Wallace). Batchian. l. Ad. sk. m. Ad. sk. [Philippines.] n. Skeleton.

Purchased.
Wallace Coll.
Gould Coll.
'Challenger' Exped.
Wallace Coll.
Wallace Coll.
Gould Coll.
Tweeddale Coll.
Baron Laugier Coll.

### 3. Eclectus cardinalis.

Lorius amboinensis, Briss. Orn. iv. p. 231 (1760); Gulliv. P. Z. S. 1875, p. 489.

? Blue-breasted Parrot, Brown, Ill. of Zool. pl. 6 (1776).

Lory d'Amboine, D'Aubent. Pl. Enl. 518 ( $\mathfrak{P}$ ).

Lori cramoisi, Buff. Hist. Nat. Ois. vi. p. 133 (1779).

Crimson Lory, Lath. Syn. i. p. 273, n. 49 (1781); id. Gen. Hist. ii. p. 229 (1822). Psittacus cardinalis, Bodd. Tabl. Pl. Enl. p. 30 (1783); Finsch, Neu-

Guin. p. 157 (1865).

Psittacus puniceus, Gm. S. N. i. p. 335, n. 100 (1788); Lath. Ind. Orn. i. p. 115 (1790); Bechst. Kurze Uebers. p. 92 (1811); Vieill. Enc. Méth. p. 1378 (1823); Less. Voy. Coq., Zool. i. p. 342 (partim) (1826).

Domicella punicea, Wagl. Mon. Psitt. p. 569 (1832).

Lorius cardinalis, G. R. Gr. Gen. B. ii. p. 416, n. 3 (1845); id.

Cat. Birds New Guin. p. 39 (1859).

Psittacodis intermedius, \*Bp. Consp. i. p. 4 (3) (1850); id. Compt. Rend. xxx. p. 136 (1850); id. P. Z. S. 1850, p. 26; id. Rev. et Mag. de Zool. 1854, p. 155, n. 253; id. Naumannia, 1856, Consp. Psitt. n. 240.

Eclectus puniceus, Bp. Rev. et Mag. de Zool. 1855, p. 155, n. 235;
id. Naumannia, 1856, Consp. Psitt. n. 242; Souancé, Rev. et Mag. de Zool. 1856, p. 219; Wall. P. Z. S. 1863, p. 19.

Polychlorus intermedius, Sclat. P. Z. S. 1857, p. 226.

Eclectus cardinalis, G. R. Gr. List Psitt. Brit. Mus. p. 65 (1859); id. P. Z. S. 1860, p. 357; Wall. P. Z. S. 1864, p. 286; Schleg. Mus. P.-B. Psittaci, p. 39 (1864); Finsch, Papag. ii. p. 344 (1868); G. R. Gr. Hand-list, ii. p. 157, n. 8242 (1870); Meyer, Zool. Gart. 1874, p. 161; Schleg. Mus. P.-B. Psittaci, Revue, p. 13 (1874); Gieb. Thes. Orn. ii. p. 74 (1875); Salvad. Ann. Mus. Civ. Gen. vii. p. 757, n. 5 (nec n. 2), et errata-corrige (1875), viii. p. 369 (1876), x. p. 31, n. 51 (1877); Forbes, Ibis, 1877, p. 283; Salvad. Ibis, 1877, p. 475; Lenz, Journ. f. Orn. 1877, p. 300; Salvad. Orn. Pap. e Mol. i. p. 210 (1880); Rehnw. Journ. f. Orn. 1881, p. 253 (Consp. Isitt. p. 141); Blas. u. Nehrk. Verh. z.-b. Gesellsch. Wien, 1882, p. 415; Blus. P. Z. S. 1882, p. 701; Meyer, Zeitschr. f. wissensch. Zool. xxxvii. p. 156 and following; Sclat. P. Z. S. 1883, p. 196; Rehnw. Vogelbild. Nachtr. 67 (1883); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 166 (1889); Meyer, Ibis, 1890, p. 28.

Eclectus intermedius, G. R. Gr. List Psitt, Brit. Mus. p. 66 (1859); id. P. Z. S. 1860, p. 358; Wall. P. Z. S. 1864, p. 287; Schleg. Mus. P.-B. Psittaci, p. 61 (1864); Finsch, Papag. ii. p. 337 (partim) (1868); Meyer, Zool. Gart. 1874, p. 161; Lenz, Journ. f. Orn. 1877, p. 360; Musschenbr. in Bernst. Dagboek, p. 256 (partim)

(1883).

Eclectus grandis, Sclat. (nec Gm.) P. Z. S. 1860, p. 223; Rosenb. Journ. f. Orn. 1862, p. 61; id. Nat. Tijschr. Ned. Ind. xxv. pp. 140, 141 (partim) (1863); Sahad. Ann. Mus. Civ. Gen. vii. p. 737, n. 3 (1875).

Psittacodis magnus, Rosenb. (nec Gm.) Journ. f. Orn. 1862, p. 61; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 140, 141 (partim) (1863).

Eclectus amboinensis, Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xvii (1863).

Mascarinus intermedius, Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xvii (1863).

Eclectus magnus, Wall. (nec Gm.) P. Z. S. 1863, p. 19.

Psittacus intermedius, Finsch, Neu-Guin. p. 157 (1865).

? Eclectus linnæi, Rosenb. (nec Wagl.) Reis naar Zuidoostereil.
p. 100 (Goram) (1867).
? Eclectus polychlorus, Rosenb. (nec Wagl.) Reis naar Zuidoostereil.

Eclectus polychlorus, Rosenb. (nec Wagl.) Reis naar Zuidoostereil. p. 100 (Goram) (1867); Meyer, Zool. Gart. 1874, p. 161 Schleg. Mus. P.-B. Psittaci, Revue, p. 14 (partim) (1874).

Muscarinus intermedius, G. R. Gr. Hand-list, ii. p. 158, n. 8245 (partin) (1870).

Adult male. Very much like the males of E. pectoralis and E. roratus, but smaller, of a purer and darker green, with very little blue on the tail, where this colour is confined towards the tip of the lateral tail-feathers and to the external web of the outer one; the yellowish band at the tip of the tail is narrower: upper mandible red with the tip yellowish, under mandible black; feet blackish. Total length 15.7 to 15.1 inches, wing 9.1 to 8.1, tail 5.15 to 4.75, bill 1.63; tarsus 0.85.

Female. Very much like the female of E. roratus, having the nape-collar, the breast, and the abdomen purple; but it differs in being smaller, of a duller red on the back and wings, and in having the under tail-coverts not yellow, but red, only the longer ones being more or less yellow; the tail wants the well-defined yellow band at the tip, which is of a bright red tinged with yellow; the blue primary-coverts have a very narrow green outer edge: iris yellowish; bill and feet black. Total length 15 to 14 inches, wing 9.7 to 9.25, tail 4.9 to 4.44, bill 1.5 to 1.4, tarsus 0.84.

Hab. The Moluccas, where it is confined to the Amboyna group

-Amboyna, Ceram, Bouru.

oll. [C.].

### 4. Eclectus riedeli.

Eclectus riedeli, Meyer, P. Z. S. 1881, p. 917; id. Verh. zool.-bot. Gesellsch. Wien, 1881, p. 772; Salvad. Ann. Mus. Civ. Gen. xviii. p. 419, n. 8 (1882); id. Orn. Pap e Mol. iii. p. 517 (1882); Meyer, Zcitschr. f. wissensch. Zool. xxxvii. p. 156 and following (1882); Rehmv. Vogelbild. Nachtr. 69 (1883); Selat. P. Z. S. 1883, pp. 51, 53, 58, 194, 196, 200, pl. xxvi.; Musschenbr. in Bernst. Dagboek, pp. 256, 258 (1883); Sharpe, Godd's Birds New Guin. pt. xvi. pl. 1\* (1884); Meyer, Sitzb. u. Abh. Gesellsch. Isis, 1884, Abh. i. p. 16; Forbes, P. Z. S. 1884, p. 431, n. 11; Meyer, Zeitschr. f. ges. Orn. i. pp. 194, 196 (1884); Forbes, Natural. Wander. p. 357 (1885); Büttik. Not. Leyd. Mus. viii. p. 61 (1886); Pelz. u. Lor. Ann. d. naturh. Hofmus. 1888, p. 39; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 165 (1889); Tristr. Cat. Coll. B. p. 76 (1889).

Adult male. Very much like the males of the allied species, especially of *E. cardinalis*, having a pure grass-green colour, with the head and neck brighter, but has the tail with a broad bright yellow band at the tip; under tail-coverts slightly yellowish: "iris pale orange; upper mandible scarlet, fading into orange towards the

<sup>\*</sup> Of the two birds figured the one supposed to be an adult female is a young one.

tip, lower mandible black; legs and feet bluish black" (Forbes). Total length 13.8 inches, wing 9.8, tail 4.9, bill 1.5 to 1.35, tarsus 0.8.

Adult female. Red; back, uropygium, upper tail-coverts, and wings darker and duller red; under tail-coverts pure yellow; primaries, their wing-coverts, and edge of the wing deep blue; the secondaries are red on the outer web, blue at the tip and on the inner web; the innermost secondaries are entirely red; tail red above, golden yellow-red underneath, and with a broad well-defined yellow band at the tip: "iris pale yellow; bill black; feet and legs greyish black" (H. O. Forbes). Total length 13 inches, wing 8.7, tail 4.9, bill 1.35, tarsus 0.8.

Young male. Resembles the female, but has the back and wings olive-green, with a red tinge towards the edges of the feathers: "iris grey; upper mandible orange, with the culmen greyish black, tip corneous; lower mandible black; legs and feet dirty grey" (H.

O. Forbes) \*.

Hab. Tenimber Islands.

Larat Is., Timor Laut, Aug. Tweeddale Coll. a. 3 ad. sk. (H. O. Forbes). Larat Is., Timor Laut, Aug. H. O. Forbes, Esq. H. O. Forbes, Esq. c, d. 3 ad. et Loetoe, Timor Laut, Aug. [C.]. ♀ imm. sk.

### 5. Eclectus westermanni.

? Eastern Parrot, Lath. Syn. Suppl. i. p. 64 (1787); id. Gen. Hist. ii.

p. 251 (1822).

P. Psittacus orientalis, Lath. Ind. Orn. i. p. 125 (1790); Bechst. Kurze Uebers. p. 101 (1811); Vieill. N. D. xxv. p. 375 (1817). Kuhl, Consp. Psitt. p. 99 (1820); Vieill. Enc. Méth. p. 1406 (1823); Wagl. Mon. Psitt. p. 745 (1832).

? Eos orientalis, G. R. Gr. Gen. E. App. p. 20 (1849).

Psittacodis westermani, Bp. Consp. Av. i. p. 4 (1850)(type examined); id. P. Z. S. 1850, p. 26 (note): id. Compt. Rend. xxx. p. 136 (1850); id. Rev. et Mag. de Zool. 1854, p. 155, n. 234; id. Naumannia, 1856, Consp. Psitt. n. 241; Souancé, Rev. et Mag. de Zool. 1856, p. 218; Rosenb. Journ. f. Orn. 1862, p. 66; id. Nat. Tijdschr. Ned. *Ind.* xxv. p. 146 (1863).

Polychlorus westermanni, Sclat. P. Z. S. 1857, p. 226, pl. 127.

Eclectus westermanni, G. R. Gr. List Psitt, Brit. Mus. p. 66 (1859);
id. P. Z. S. 1860, p. 358; Wall. P. Z. S. 1864, p. 287; Schleg. Mus. P.-B. Psittaci, p. 42 (1864); Finsch, Papag. ii. p. 339 (1868); Meyer, Zool. Gart. 1874, p. 161; Schleg. Mus. P.-B. Psittaci, Revue, p. 16 (1874); Gieb. Thes. Orn. ii. p. 77 (1875); Salvad. Ann. Mus. Civ. Gen. x. p. 31, n. 52 (1877); Forbes, Ibis, 1877, p. 283; Salvad. Ibis, 1877, p. 475; Rosenb. Zool. Gart. 1878, p. 345; Salvad. Orn. Pap. e Mol. i. p. 213 (1880); Meyer,

<sup>\*</sup> The specimen which I have described as a young male is, I have no doubt, wrongly labelled Q; the orange colour of the upper mandible makes me believe that it is a male.

Zeitschr. f. wissensch. Zool. xxxvii. p. 156 (1882); Musschenbr. in Bernst. Dagboek, p. 256 (1883); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 166 (1889).

Psittacus westermani, Finsch, Neu-Guin. p. 157 (1865).

Muscarinus westermani, G. R. Gr. Hand-list, ii. p. 158, n. 8244 (1870).

Eclectus polychlorus, part., Meyer, Zool. Gart. 1874, p. 161.

Eclectus corneliæ, part., Rchnw. Journ. f. Orn. 1881, p. 253 (Consp. Psitt. p. 141); id. Vogelbild. Nachtr. 68 (1883).

Adult male. Green; edge of the wing blue; under wing-coverts green; primaries deep blue, edged with green towards the base of the outer web; secondaries green, the outer ones blue at the tip and on the inner web; primary wing-coverts blue edged with green; under wing-coverts red; tail green, with a yellowish band at the tip; the outer tail-feathers tinged more or less with blue on the outer web: iris yellow; upper mandible red, lower one black; feet black. Total length about 15 inches, wing 9.5 to 9, tail 5.15, bill 1.5, tarsus 0.7.

Female. Unknown.

Hab. Unknown, but probably the Moluccas or the Papuan Islands.

This bird is only known from specimens kept in confinement. Dr. Meyer has expressed the opinion that *E. westermanni* is founded on specimens which had lived in confinement, and whose plumage was consequently arrested in development. Mr. Sharpe, agreeing with Dr. Meyer's opinion, thinks that, after all, the specimens called *E. westermanni* may belong to *E. riedelii*. I cannot offer a decided opinion, but I should say they are different, as in *E. westermanni* the primaries and their wing-coverts show distinct outer green edges, which are wanting in the males of *E. riedelii*.

a. Ad. st.b. Ad. st.c. Sternum.

Moluceas [?].

Zoological Society. Zoological Society.

The second specimen, although green, shows a curious mottling, many feathers being brown-red with green edges.

#### 6. Eclectus cornelia.

Eclectus cornelia, Bp. P. Z. S. 1849, p. 143, pl. xi. (type examined); id. Compt. Rend. xxx. p. 135 (1850); id. Rev. et Mag. de Zool. 1854, p. 155, n. 237; id. Naumannia, 1856, Consp. Psitt. n. 245; G. R. Gr. List Psitt. Brit. Mus. p. 66 (1859); Sclat. P. Z. S. 1860, p. 242; G. R. Gr. P. Z. S. 1860, p. 357; Rosenb. Nat. Tijdschr. Ned. Ind. xxv. p. 146 (1863); Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xvii (1863); Wall. P. Z. S. 1864, pp. 286, 294; Schleg. Dierent. p. 69, cum figura (1864); G. R. Gr. Hand-list, ii. p. 157, n. 8241 (1870); Salvad. Ann. Mus. Civ. Gen. x. p. 31, n. 53 (1877); id. Orn. Pap. e Mol. i. p. 215 (1880); id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 166 (1889).

Eclectus carolinæ (errore), Rosenb. Journ. f. Orn. 1862, p. 66.

Psittacus cornelia, Finsch, Neu-Guin. p. 157 (1865).

Eclectus corneliæ, Finsch, Papag. ii. p. 348 (1868); id. P. Z. S. 1869, p. 128; Meyer, Zool. Gart. 1874, p. 161; Gieb. Thes. Orn. ii. p. 74 (1875); Forbes, Ibis, 1877, p. 283; Salvad. Ibis, 1877, p. 475; Rosenb. Zool. Gart. 1878, p. 345; Rehnw. Journ. f. Orn. p. 253 (Consp. Psitt. p. 141) (partim); id. Vogelbild. Nachtr. 68 (1883); Meyer, Zeitschr. f. wissensch. Zool. xxxvii. pp. 156 and following (1882).

Eclectus polychlorus (part.), Meyer, Zool. Gart. 1874, p. 161. Eclectus westermanni (part.), Musschenbr. in Bernst. Dagboek, p. 256 (1883).

Adult female. Red; head, neck, and lower parts, including the under tail-coverts, brighter; back, uropygium, and upper tail-coverts darker; edge of the wing, primaries, and their coverts deep blue; secondaries red, with the inner web dark green; outermost secondaries blue, with the base of the outer web green; under wing-coverts red, more or less mixed with blue; tail red with the tip a little lighter, underneath golden red: "iris yellowish, with an outer ring red; bill black; feet dusky" (Finsch). Total length 15.7 inches, wing 10.4, tail 5.9, bill 1.4, tarsus 0.8.

Hab. Unknown, but most likely one of the Moluccas or Papuan Islands.

This bird is also only known from specimens kept in confinement, and it has been supposed that it might be the female of E. westermanni, of which only male specimens are known; but the much larger size of E. cornelia renders this very improbable. Dr. Meyer thought that the specimens called E. cornelia might be females of one of the known species, which had lost their proper colouring through having been kept in confinement. I cannot express myself positively on the subject, but I am inclined to believe that E. cornelia is a distinct species, having some likeness to several allied forms. It is interesting to point out that while the bright blue edge of the wing would indicate some resemblance of E. cornelia to E. pectoralis, the dark red colour of the back, wings. and tail would show near relation to E. cardinalis, and finally that the want of the blue or purple band on the upper back and the want of the same colour on the breast or abdomen show near relation to E. riedelii.

a. Ad. st.

Moluccas ?

Zoological Society.

#### 31. GEOFFROYUS.

Geoffroyus, Bp. Consp. Av. i. p. 6 (1850) . . . . . G. personatus.
Psittacus, (subgen.) Geoffroy, Gray, List Psitt. Brit.

Mus. p. 71 (1859).
Phydrographylys Polyny f Ony 1881 - 247

Range. The Moluccas, the Papuan Islands, and the Timor Group.

### Key to the Species \*.

a. Head of the males red, tinged on the hind part with lilac-blue.

a'. Nape green like the back.

a''. Uropygium green, with no dark red patch.

a". Green colour paler, somewhat yellowish.

 $a^4$ . Under wing-coverts pale blue. a<sup>5</sup>. Largest: wing 7.7 to 7.9 inches;

head of the female brown-olive...  $b^5$ . Median: wing 6.7 to 7.3 inches;

head of the female distinctly greenish .....

c<sup>5</sup>. Smaller: wing 5.6 to 5.8 inches; head of the female a little darker than that of the above species ...

b<sup>1</sup>. Under wing-coverts brighter blue; wing 6.2 to 6.8 inches; head of the female brown, with no greenish tinge on the pileum .....

b". Green colour purer and darker, with no yellowish tinge.

 $c^4$ , Larger: wing 7 to 7.3 inches; head of the female dark brown ......

d<sup>4</sup>. Smaller: wing 6 inches; (colour of the female's head unknown) . . . . . floresianus, p. 406. e<sup>4</sup>. Median: wing 6.6 to 6.4 inches ....

b". Uropygium dark brown-red. c'''. Interscapular feathers not distinctly

edged with brown-red.

f. Pale brown spot on the smaller wing-coverts wanting or very slight.

keyensis, p. 401.

timorlaoensis, p. 402.

personatus, p. 402.

aruensis, p. 404.

rhodops, p. 405.

sumbavensis, p. 407.

\* I am not acquainted with the following species recently described:

#### Geoffroyus sudestiensis.

Geoffroyus sudestiensis, De Vis, Ann. Report on Brit. New Guin. p. 58 (1890); id. Colonial Papers, No. 103, p. 105 (1890); id. Ibis, 1891, p. 28.

Male. Above bright green, beneath paler; front, cheeks, chin, throat, and ear-coverts cinnabar-red, the last tipped with blue. Head and fore neck pale lilac-tinted blue, on the vertex strongly tinged in certain lights with yellow. Quills fuscous, first primary narrowly edged with dark blue; rest of quills with their outer webs entirely, and inner webs to an increasing extent, green. No shoulder-spot. Axillaries and under wing-coverts bright blue, under surface of wing fuscous; upper tail-coverts and middle tail-feathers above yellowish green, inner webs and under surface of tail greenish yellow. Rump green. Maxilla red, with the tip pale, mandible bluish fuscons. Feet fuscous. Total length 240 millim, wing 175, tail 100, bill 24, tarsus 15." (De Vis.)

Hab. Sudest Island, Louisiade Isl.

Obs. "A species distinguished from the two red-throated species (?) by a strong wash of yellow on the head, visible only in certain lights, and by the absence of the cubital spot." (De Vis.)

d <sup>5</sup> . Under wing-coverts bright blue;	
red-brown uropygium duller and darkere <sup>5</sup> . Under wing-coverts pale blue; red-	pucherani, p. 407.
brown uropygium brighter  g <sup>1</sup> . Brown spot on the smaller wing-	jobiensis, p. 409.
coverts always present; under wing-	
coverts very deep blue $d'''$ . Interscapular feathers with broad red-	mysorcusis, p. 409.
brown edgesb'. Nape bright greenish blue.	dorsalis, p. 410.
c". Uropygium with no red-brown patch, or with the edges of the feathers very pale	
brown d''. Uropygium brown-red.	cyanicollis, p. 410. obiensis, p. 411.
b. Head of both males and females with no red; males with a bluish-grey collar; innermost	/ 1
secondaries near the scapulars yellowish white on the inner web.	
c'. Head of the males yellow, of the females above greenish with a grev-bluish tinge	heteroclitus, p. 412.
d'. Head of both male and female green; no	пенегосиная, р. 412.
bluish-grey collar round the neck of the female	simplex, p. 413.

### 1. Geoffroyus keyensis.

Psittacus capistratus, G. R. Gr. (nec Bechst.) P. Z. S. 1858, pp. 183, 195 (♀); id. Cat. B. New Guin. pp. 42, 60 (1859); id. List Psitt. Brit. Mus. p. 72 (1859); id. P. Z. S. 1861, p. 437. Geoffroyus personatus (part.), Wall. P. Z. S. 1864, p. 283. Psittacus rhodops (part.), Finsch, Neu-Guin. p. 156 (1865). Geoffroyus capistratus, Rosenb. (nec Bechst.) Reis naar Zuidoostereil. p. 8 (1867). Eclectus personatus (part.), Schleg. Ned. Tijdschr. Dierk. iii. p. 332 (A, grande forme, partim), p. 333 (1866), iv. p. 4 (partim) (1871); id. Mus. P.-B. Psittaci, Revue, p. 18 (partim) (1874). Pionias rhodops (part.), Finsch, Papag. ii. pp. 380, 955 (1868). Geoffroyus keyensis, Schley. M.S. (Finsch, Papag. ii. p. 956) (1868); Salvad. Ann. Mus. Civ. Gen. x. p. 29, n. 37 (1877); id. P. Z. S. 1878, p. 86; id. Ann. Mus. Civ. Gen. xiv. p. 638 (1879); id. Orn. Pap. e Mol. i. p. 173 (1880); id. Voy. Chall., Birds, p. 67 (1881); Büttik, Not. Leyd. Mus. viii. p. 61 (partim) (1886); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 162 (1889). Geoffroy capistratus, G. R. Gr. Haud-list, ii. p. 160, n. 8273 (1870). Eelectus rhodops (part.), Gieb. Thes. Orn. ii. p. 76 (1875). Rhodocephalus keyensis, Rchnw. Journ. f. Orn. 1881, p. 250 (Consp. Psitt. p. 138); id. Vogelbild, Nachtr. 65 (1883).

Adult male. Green, underneath paler; forehead and cheeks red; vertex, hind part of the head, and cheeks lilac-blue; chin yellowish; a spot on the wing-coverts brown; quills with the outer webs green, part of the inner web and below blackish; first primary black, with the outer web edged with bluish green; under wing-coverts

and axillaries pale blue; upper tail-coverts and tail yellowish green: "iris light red; upper mandible scarlet; under mandible, legs, and feet black" (*H. O. Forbes*). Total length 11.8 to 12.8 inches, wing 7.7 to 7.9, tail 3.9 to 4.2, bill 1.05, tarsus 0.7.

Female. Head pale brown; bill dusky.

Young. Has the head green.

Hab. Ké Islands.

a. of ad. sk. Ké Islands, July 10 Tweeddale Coll. (H. O. Forbes).

b. of ad. sk. Ké Islands. A. R. Wallace [C.].

(Type of Psittacus capistratus, G. R. Gr.)  $c, d, e, \beta$  imm.,  $\varphi$  ad., et imm., sk.

## 2. Geoffroyus timorlaoensis.

Geoffroyus keiensis, Selat. (nec Schleg.) P. Z. S. 1883, pp. 51, 194,
 200 (Timor-laut); Forbes, P. Z. S. 1884, pp. 426, 431, n. 10; id.
 Net. Worder, 256 (1885).

Nat. Wander. p. 356 (1885).

Geoffroyus timorlaoensis, Meyer, Sitzb. u. Abh. Gesellsch. Isis, i. p. 15 (1884); Salvad. Ibis, 1884, p. 355; id. P. Z. S. 1884, p. 578; Sharpe, Gould's B. New Guin. pt. xxiii. pl. 2 (1887); Pelz. u. Lor. Ann. d. naturh. Hofmus. 1888, p. 40; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 163 (1889).

Geoffroyns keyensis, Büttik. (nec Schleg.) Not. Leyd. Mus. viii. p. 60

(1886).

Very much like *G. keyensis*, but smaller and with the head of the female much more tinged with greenish: "iris pale yellow; upper mandible scarlet, with the tip orange, lower black; legs and feet lavender or stone-grey" (*H. O. Forbes*). Total length 9.4 to 10.2 inches, wing 6.7 to 7.3, tail 3.55 to 3.8, bill 0.98 to 1.02, tarsus 0.68.

Hab. Tenimber Islands.

a, b. ♂♀ ad. sk. Loetoe, Timor-laut, Aug. 9 H. O. Forbes [C.], & Sept. 22 (H. O. Forbes).

c, d. ♂♀ ad. sk. Loetoe, Timor-laut, Sept. 19 Tweeddale Coll. & 22 (H. O. Forbes).

# 3. Geoffroyus personatus.

Le Perroquet Geoffroy, Levaill. Perr. ii. p. 104, pl. 112 (3), 113

(\$\times\$ or rather young bird) (1805) (Nouvelle Hollande!). Psittacus personatus, Shaw, Gen. Zool. viii. 2, p. 544 (1811) (ex. Le-

vaillant); Less. Compl. de Buff., Ois. ix. p. 214 (1837).

Psittacus geoffroyi, Bechst. Lath. Ueb. p. 103; pl. 21 (1811); Kuhl, Consp. Psitt. p. 85 (1822); Steph. Gen. Zool. xiv. p. 107 (1826); Voigt, Cuv. Uebers. p. 744 (1831); S. Müll. & Schleg. Verh. Landen Volkenk. pp. 107 (partim), 209 (Timor) (1839–44); Brehm, Mon. d. Papag. t. 65 (from Levaill. pl. 113) (1854).

Psittacus geoffroyanus, Vieitl. N. D. xxv. p. 311 (1817) (ex Le-

vaillant); id. Enc. Méth. iii. p. 1365 (1823); Less. Tr. d'Orn. p. 199 (partim) (1831).

Red-faced Parrot, Lath. Gen. Hist. ii. p. 183 (1822).

Psittacula batavensis, Wagl. (nec Psittacus batavensis, Lath.) Mon. Psitt. p. 624 (1832) (Java! N. Hollandia australi!); ? Hartl. Syst. Verz. Ges. Mus. p. 88 (1844); G. R. Gr. Gen. B. ii. p. 423, n. 13 (1846).

Poicephalus geoffroyi, Sw. Class. B. ii. p. 301 (1837).

Geoffroyus personatus, Bp. Consp. Av. i. p. 6 (1850); id. Rev. et Mag. de Zool. 1854, p. 155, n. 227; ? Souancé, Rev. et Mag. de Zool. 1856, p. 217; Bp. Naumannia, 1856, Consp. Psitt. n. 234; Rosenb. Journ. f. Orn. 1862, p. 66 (Timor); id. Nat. Tijdschr. Ned. Ind. xxv. p. 146 (Timor) (1863); Wall. P. Z. S. 1864, pp. 283, 293 (partim); Salvad. Ann. Mus. Civ. Gen. (2) ix. p. 479 (1890) (Timor, Pulo Semau).

Psittacus jukesii, G. R. Gr. List Psitt. Brit. Mus. p. 72 (Timor)

(1859).

Geoffroyus jukesii, Sclat. P. Z. S. 1860, p. 226 (Timor); Wall. P.

Z. S. 1863, p. 484 (Timor).

Eclectus personatus (part.), Schleg. Mus. P.-B. Psittaci, p. 42 (Timor) (1864); id. Ned. Tijdschr. Dierk. iii. p. 332 (partim) (1866); id. Mus. P.-B. Psittaci, Revue, p. 18 (partim) (1874) (Timor, Wetter); Gieb. Thes. Orn. ii. p. 76 (partim) (1875).

Psittacus suckesii (errore), Schleg. Ned. Tijdschr. Dierk. iii. p. 333

(partim) (1866).

Pionias personatus (part.), Finsch, Papag. ii. p. 375 (1868).

Geoffroy personatus (part.), G. R. Gr. Hand-list, ii. p. 160, n. 8270 (Timor) (1870).

Very much like G. aruensis, but smaller and with the under wing-coverts of a lighter blue; it seems also as if the cap was reduced, as it does not come so low down on the nape. The male has very much the same colouring as the male of G. aruensis; but the female is more easy to distinguish, having the head of a paler brown, and more greenish on the forehead and on the cheeks. "Iris yellowish red; the upper mandible in the male red, with the point yellowish; lower mandible dusky; feet lead-grey" (Loria); the female has the "bill and feet dusky olive; the iris pale yellow" (Wallace). Total length about 9.5 inches, wing 5.6 to 5.8, tail 2.7 to 3, bill 0.8 to 0.9, tarsus 0.55.

*Hab.* Timor, Semao Island, and also Wetter Island (Schlegel). This is the smallest species of the genus, and most likely the bird figured by Levaillant.

Baron Laugier Coll. a. ♂ ad. sk. Timor Copang. J. B. Jukes [P.]. b. 3 ad. st. (Type of Psittacus jukesii, G. R. Gr.) E. Timor.  $c, d, e. \ \$ 2 ad. & A. R. Wallace | C. |. young sk.
f. Q ad. sk.
g. Young sk. Semao Is. (A. R. Wallace). Tweeddale Coll. Semao 1s. (A. R. Wallace). Gould Coll. h. & young sk. [Moluccas.] Purchased.

## 4. Geoffroyus aruensis.

Psittacus aruensis, G. R. Gr. P. Z. S. 1858, pp. 183, 196; id. Cat. B. New Guin. pp. 42, 60 (1859); id. List Psitt. Brit. Mus. p. 72

(1859); id. P. Z. S. 1861, p. 437.

Geoffroyus aruensis, Sclat. P. Z. S. 1860, p. 227; Rosenb. Journ. f. O'rn. 1862, p. 63; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 145, 226, n. 28 (1863); id. Journ. f. Orn. 1864, p. 115; id. Reis naar Zuidoostereil. p. 48 (1867); Salvad. e D'Alb. Ann. Mus. Civ. Gen. vii. p. 810 (1875); Salvad. Ann. Mus. Civ. Gen. ix. p. 12 (1876), x. p. 29, n. 38 (1877); Sharpe, Journ. Linn. Soc., Zool. xiii. p. 309 (1878), p. 491, sp. 11 (1878); Ramsay, Pr. Linn. Soc. N. S. W. iii. p. 252 (1878-79), iv. p. 96 (1879); D'Alb. e Salvad. Ann. Mus. Civ. Gen. xiv. p. 36 (1879); Sharpe, Journ. Linn. Soc., Zool. xiv. p. 685 (1879); Salvad. Orn. Pap. e Mol. i. p. 175 (1880); Sharpe, Journ. Linn. Soc., Zool. xiv. p. 426 (1882); Meyer, Zeitschr. f. ges. Orn. 1884, p. 273; Büttik. Not. Leyd. Mus. viii. p. 61 (1886); Salvad. Mem. Ac. Sc. Tor. (2) xl. p. 163 (1889); Tristr. Cat. Coll. B. p. 78 (1889).

Geoffroyus personatus, part., Wall. P. Z. S. 1864, p. 283.

Eclectus personatus aruensis, Schleg. Mus. P.-B. Psittaci, p. 43 (1864).

Psittacus rhodops, part., Finsch, Neu-Guin. p. 156 (1856).

Eclectus personatus, part., Schleg. Ned. Tijdschr. Dierk. iii. p. 332 (1866), iv. p. 4 (partim) (1871); id. Mus. P.-B. Psittaci, Revue, p. 18 (partim) (1874); Gieb. Thes. Orn. ii. p. 76 (partim) (1875). Pionias personatus, part., Finsch, Papag. ii. p. 375 (1868).

Geoffroy aruensis, G. R. Gr. Hand-list, ii. p. 160, n. 8272 (1870). Geoffroyus pucherani, Sharpe (nec Bp.), Journ. Linn. Soc., Zool. xiii. p. 80 (1876).

Rhodocephalus aruensis, Rchnw. Journ. f. Orn. 1881, p. 249 (Consp. Psitt. p. 137); id. Vogelbild. Nachtr. 65 (1883).

Adult male. Green, underneath paler; forehead and cheeks red; vertex and hind part of the head bright lilac-blue; a brown spot on the wing-coverts: "iris pale yellow; upper mandible orange-red, under mandible black; feet greenish lead" (D'Albertis). Total length 9.8 to 8.5 inches, wing 6.2 to 6.68, tail 2.6 to 2.9, bill 0.88 to 0.96, tarsus 0.65.

Female. Head brown, with a slight tinge of greenish on the lower part of the cheeks: "bill black" (D'Albertis) or "dusky olive" (Wallace).

Young. Has the upper part of the head green like the back, and no brown spot on the smaller wing-coverts.

Hab. Aru Islands and Southern New Guinea.

This species is much smaller than either G. keyensis or G. timorlaoensis, and besides it has the under wing-coverts of a much brighter blue; the upper tail-coverts purer green, with no yellowish tinge. The adult female is easily distinguished by the head being of a darker brown, with no greenish tinge on the upper part; the brown spot on the wing-coverts is present also in the female.

a, b. ♂♀ ad. sk.

Aru Islands.

Wallace Coll. (Types of species.)
Wallace Coll.

c. 3 ad. sk.

Aru Islands.

d, e. d ad. et Gould Coll. Aru Islands (A. R. Wallace). imm. sk.

f. Imm. sk. Port Moresby. Rev. S. Macfarlane [C.].

g, h. Ad. et imm.S.E. New Guinea (A. Gollie). Tweeddale Coll. sk.

i-m.  $\mathcal{J} \supseteq \text{ad. et}$ East Cape. C. Hunstein [C.]. imm. sk.

## 5. Geoffroyus rhodops.

Psittacus fuscicapillus, Vieill. N. D. xxv. p. 316 (Q, Java!) (1817) (type examined)\*; id. Enc. Méth. p. 1368 (1823); G. R. Gr. Gen. B. ii. p. 421, n. 22 (1846); id. List Psitt. Brit. Mus. p. 72 (1859); id. P. Z. S. 1858, p. 358 (Bourn).

? Psittacus spadiceocephalus, Kuhl\*, Consp. Psitt. p. 84 (♀) (1820); Steph. Gen. Zool. xiv. 2, p. 107 (1826).

Psittacus fieldii, Sw. \* Quart. Journ. Sc. xix. p. 198 (1825); Wagl. Mon. Psitt. p. 577 (1832).

Psittacus personatus, Less. (nec Shaw) Voy. Coq., Zool. i. pt. 1, p. 373 (Bouru) (1826), pt. 2, p. 630 (1828); G. R. Gr. List Psitt. Brit. Mus. p. 42 (syn. emend.) (1859). Pionus fuscicapillus, Wagl. Mon. Psitt. p. 611 (1832).

Psittacus geoffroy (part.), S. Müll. Verh. Land- en Volkenk. p. 107 (1839-44).

Geoffroyus fuscicapillus. Bp. Rev. et Mag. de Zool. 1854, p. 155,

n. 230; id. Naumannia, 1856, Consp. Psitt. n. 235.

Geoffroyus personatus (part.), Souance, Rev. et May. de Zool. 1856, p. 217; Sclat. P. Z. S. 1860, p. 226 (Amboyna); Rosenb. Journ.f. Orn. 1862, pp. 61, 62 (Amboyna, Ceram); Wall. P. Z. S. 1863, p. 19 (Bouru, Amboyna, Ceram, Goram); id. P. Z. S. 1864, p. 283 (part.).

Psittacus rhodops, G. R. Gr. P. Z. S. 1861, p. 436 (descr. nulla);

Finsch, Neu-Guin. p. 156 (part.) (1865).

Eclectus geoffroyi, Schley. (nec Bechst.) Dierent. p. 69 (1864)

(Amboyna, Bourn).

Eclectus rhodops, Schley. Mus. P.-B. Psittaci, p. 43 (1864) (Ceram,

Amboyna, Bourn).

Eclectus personatus (part.), Schleg. Ned. Tijdschr. Dierk. iii. p. 332 (A, grand forme, partim) (1866), iv. p. 4 (part.) (1871); id. Mus. P.-B. Psittaci, Revue, p. 18 (3, part. p. 19) (1874); Rosenb. Zoolog. Gart. 1878, p. 345 (part.).

Pionias rhodops (part.), Finsch, Papag. ii. p. 380 (1868); Lenz,

Journ. f. Orn. 1877, p. 361.

Geoffroy rhodops, G. R. Gr. Hand-list, ii. p. 160, n. 8271 (1870)

(Ceram, Amboyna).

Geoffroy fuscicapillus, G. R. Gr. op. cit. no. 8276 (1870).

Geoffroyus rhodops, Salvad. Ann. Mus. Civ. Gen. viii. p. 369 (1876) (Bourn); id. P. Z. S. 1878, p. 80; id. Orn. Pap. e Mol. i. p. 179 (1880); id. Voy. Chall., Birds, p. 61 (1881); Blas. u. Nehrk. Verh. z.-b. Ges. Wien, 1882, p. 414; Büttik. Not. Leyd. Mus. viii. p. 61 (1886); Salvad. Mem. R. Ac. Sc. Tor. (2) xl. p. 163 (1889); Tristr. Cat. Coll. B. p. 79 (1889).

Geoffroyus schlegeli, Salvad. Ann. Mus. Civ. Gen. x. p. 29, n. 40

<sup>\*</sup> Vieillot's description is wrong, and those of Kuhl and Swainson possibly belong to the female of G. rhodops.

(1877) (Bourn, Boano, Ceram, Amboyna, Haronko, Goram, Monawolka).

Rhodocephalus geoffroyi (part.), Rchnw. Journ. f. Orn. 1881, p. 249 (Consp. Psitt. p. 137); id. Vogelbild. Nachtr. 65 (1883).

Psittacula geoffroy, Pelz. u. Lor. Ann. d. naturh. Hofmus. iii. p. 40 (1888).

Similar to the other species already described, but it is distinguished by the darker green colour, and by the deep blue colour of the under wing-coverts and axillaries; the male has the red colour of the face generally brighter than in the other species and descending lower down on the throat; the female is easily distinguished from the females of the allied species by the very dark brown-chestnut colour The male has the upper mandible red, the lower whitish; both mandibles are dusky in the female. Total length 11 to 11.6 inches, wing 7 to 7.3, tail 3.3 to 3.55, bill 0.98 to 1.8, tarsus 0.72.

Young. Upper part of the head green like the back; sides of the

head greyish green; no brown spot on the wing-coverts.

Hab. Confined to the Southern Moluccas, or to the Amboyna Group, from Bourn to Boano, Ceram, Amboyna, Haronko, Goram, and Monawolka.

a, b. Ad. st.	Moluceas.	Sir E. Belcher [P.].
c. Ad. st.	Moluceas.	Baron Laugier Coll.
d. Imm, st.	[Gilolo.]	Purchased.
e. of ad. sk.	N. Ceram (A. R. Wallace).	Gould Coll.
f. Ad. sk.	Amboyna (Gov. Riedel).	Tweeddale Coll.
g. Ad. sk.	Amboyna.	Wallace Coll.
h. d imm. sk.	Amboyna.	'Challenger' Expedition.
<i>i.</i> ♂ ad.; <i>k.</i> ♂ imm.; <i>l.</i> ♀ ad. sk.	Amboyna, May, June.	H. O. Forbes, Esq. [C.]
$m, n, \beta \ Q \text{ ad. sk.}$	Bourn.	Wallace Coll.
o, p. Q ad. sk.	Cajeli, Bouru, Nov.	H. O. Forbes, Esq.
q. Ad. sk.	[Waigiou.]*	Wallace Coll.
r, s. Imm. sk.	[Mysol.]*	Wallace Coll. (Types of species.)
t. Ad. sk.	[Mysol] (A. R. Wallace).	Gould Coll.
u, v.		Tweeddale Coll.

# 6. Geoffroyus floresianus.

Geoffroyus jukesii (part.), Wall. P. Z. S. 1863, p. 484 (Flores).

(Flores); Tristr. (nec Shaw) Cat. Coll. B. p. 79 (1889). Eclectus personatus (part.), Schleg. Mus. P.-B. Psittaci, p. 42 (specimen no. 5 excepted) (Flores) (1864); id. Ned. Tijdschr. Dierk. iii. p. 332 (partim) (1866); id. Mus. P.-B. Psittaci, Revue,

p. 18 (1874) (Flores). Psittacus suckesii (errore), Schleg. Ned. Tijdschr. Dierk. iii. p. 333

(part.) (1866) (Flores). Pionias personatus (part.), Finsch, Papag. ii. p. 375 (1868).

<sup>\*</sup> I have shown in my 'Ornitologia della Papuasia', that the types of G. rhodops have been wrongly labelled by Mr. Gray as from Waigiou and Mysol.

Geoffroy personatus (part.), G. R. Gr. Hund-list, ii. p. 160, n. 8270 (Flores) (1870).

Rhodocephalus jukesii, Rchnw. (nec Gray) Journ. f. Orn. 1881, p. 249 (Consp. Psitt. p. 137) (Flores); id. Vogelbild. Nachtr. 65 (1883).

This species is dark green like G. rhodops, but it is much smaller; the blue under wing-coverts and axillaries are a little lighter, but darker than in G. personatus, which species it resembles in size. Total length 9.5 inches, wing 6, tail 2.8 to 3, bill 0.82, tarsus 0.6.

The adult male has the head very much like the other allied species; I have not seen an adult female; an apparently immature male has the whole head of a cinnamon colour, with lilac reflexions

on the upper part.

The young bird has the upper part of the head green like the back; the cheeks and sides of the head dull green; the brown spot on the smaller wing-coverts slightly indicated.

Hab. Flores.

a.  $\vec{\sigma}$  ad.; b. Imm.;Flores.Wallace Coll.c. Juv. sk.(Types of species.)d. Juv. sk.Flores (A. R. Wallace).

## 7. Geoffroyus sumbavensis.

Geoffroyus yukesi, Guillem. (nec Gray) P. Z. S. 1885, p. 502 (Sumbawa).

Like G. floresianus, only a little larger: "iris lemon-yellow; upper mandible red, lower slate-brown; feet grey" (Guillemard). Total length 10·05 to 9·7 inches, wing 6·6 to 6·4, tail 3, bill 0·95, tarsus 0·62.

Female. Apparently with a brown head, lighter and greener on the lower part of the cheeks: "bill brown" (Guillemard). Dimensions a little less than those of the male.

*Hab*. Sumbawa.

The types of this form, or species, are in the collection of the Hon. Walter Rothschild; the difference in size is not great, but apparently constant. The female examined is not fully adult, having many green feathers on the pileum among the brown ones.

# 8. Geoffroyus pucherani.

Psittacus personatus, part., Less. Voy. Coq., Zool. i. p. 373 (note) (1826); ? id. Tr. d' Orn. p. 199 (partim) (1831); ? id. Compl. de Buff., Ois. p. 608 (partim) (1838).

Psittacus geoffroyi (ex Nov. Guin.), S. Müll. Verh. Land- en Volkenk.

pp. 22, 107 (partim) (1839-44).

Pione à tête brune, Hombr. et Jacq. Voy. Pôle Sud, Zool. pl. 25 bis,

f. 3 (9) (1846).

Pionus fuscicapillus, Jueq. et Pucher (nec Vieill.) Voy. Pôle Sud, iii. p. 106 (♀) (1835) (type examined); Hartl. Journ. f. Orn. 1854, p. 166; Rosenb. Nat. Tijdschr. Ned. Ind. xxv. p. 226 (1863); id. Journ. f. Orn. 1864, p. 115, n. 31.

Geoffroyus pucherani, Bp. Naumannia, 1856, Consp. Psitt. n. 236 (descr. nulla) (ex Jacq. et Pucher.) (♀); Souancé, Rev. et May. de

Zool. 1856, p. 218 (type examined); Sclat. Journ. Pr. Linn. Soc. ii. p. 165, n. 116 (1858); id. P. Z. S. 1860, p. 227; Rosenb. Journ. f. Orn. 1862, p. 64; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 144, 226, sp. 27 (1863); id. Journ. f. Orn. 1864, p. 115, n. 27; Wall. P. Z. S. 1864, p. 283; Salvad. Ann. Mus. Civ. Gen. vii. p. 757 (1875), x. p. 29, n. 40, p. 120 (1877); id. Orn. Pap. e Mol. i. p. 183 (1880); Rchnw. Vogelbild. t. xi. f. 4 (1878-83); Nehrk. Journ. f. Orn. 1885, p. 31; Guillem. P. Z. S. 1885, p. 620; Büttik. Not. Leyd. Mus. viii. p. 61 (1886); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 163 (1889); Tristr. Cat. Coll. B. p. 79 (1889). eoffroyus personatus, Sclat. (nec Shaw) Journ. Pr. Linn. Soc. ii.

Geoffroyus personatus, Sclat. (nec Shaw) Journ. Pr. Linn. Soc. ii. p. 165, n. 115 (1858); Rosenb. Nat. Tijdschr. Ned. Ind. xxv. p. 226, n. 26 (1863); id. Journ. f. Orn. 1864, p. 115; Bernst.

Dagboek, p. 154 (1883).

Psittaeus pucherani, G. R. Gr. P. Z. S. 1858, p. 195; id. P. Z. S. 1859, p. 159; id. Cat. B. New Guin. pp. 42, 60 (1859); id. List Psitt. Brit. Mus. p. 72 (1859); id. P. Z. S. 1861, p. 436; Bernst. Nat. Tijdschr. Ned. Ind. xxvii. p. 297 (1864); Finsch, Neu-Guin. p. 156 (1865).

Psittacus personatus, G. R. Gr. (nec Shaw) P. Z. S. 1858, p. 195; id. Cat. B. New Guin. pp. 42, 60 (1859); id. P. Z. S. 1861, p. 436.

Psittacus rhodops, Bernst. (nec Gray) Nat. Tijdschr. Ned. Ind. xxvii. p. 297 (1864).

Eclectus rhodops, var., Schleg. Mus. P.-B. Psittaci, p. 166 (1864) (Guebeh, Waigiou).

Eclectus personatus (part.), Schleg. Ned. Tijdschr. Dierk. iii. p. 333
(B, petite forme β) (1866), iv. p. 4 (1871); id. Mus. P.-B. Psittaci, Revue, p. 20 (partim, b) (1874); Rosenb. Zoolog. Gart. 1878, p. 345 (partim).

Pionias pucherani, Finsch, Papag. ii. p. 385 (1868); Meyer, Sitzb. k. Ak. Wissensch. Wien, lxx. pp. 220, 223, 234 (1874); id. Sitzb.

Isis Dresd. 1875, p. 77.

Geoffroy pucherani, G. R. Gr. Hand-list, ii. p. 160, n. 8274 (1820). Rhodocephalus pucherani, Rchnw. Journ. f. Orn. 1881, p. 250 (Consp. Psitt. p. 138).

Adult male. Green, underparts paler; forehead, sides of the head, chin, and throat red; vertex and hind part of the head lilac-blue; back green, slightly tinged with olive; uropygium chestnut-red; upper tail-coverts and tail yellowish green; wings green, sometimes with an obsolete brown spot on the smaller wing-coverts; axillaries and under wing-coverts deep blue: "iris pale yellow; upper mandible red, under mandible dusky; feet dark lead-colour" (D'Albertis). Total length 9.8 to 10.5 inches, wing 6.5 to 6.9, tail 2.8 to 3.05, bill 0.88 to 0.95, tarsus 0.65.

Female. Differs from the male in having the head dark chestnut;

the sides of the head and chin greenish, the bill dusky.

Young. Head above green like the back; cheeks dusky greenish;

bill dusky, sometimes yellowish.

Hab. North-western New Guinea; Western Papuan Islands—Waigiou, Guebeh, Batanta, Salawatty, Mysol, Koffiao; and Miosnom in Geelvink Bay.

a, b. ♂ ad. sk.
b. ♂ ad. sk.
c. Ad. sk.
d. ♀ ad. sk.
Amberpon, Geelvink Bay, Jan.

Wallace Coll. Edinburgh Mus. [E.]. Purchased. e, f. Ad. sk.  $g, h. \supset Q \text{ ad. sk.}$ i. Ad. sk.

Mysol (A. R. Wallace). Mysol. Mysol.

Gould Coll. Wallace Coll. Purchased.

# 9. Geoffroyus jobiensis.

Eclectus personatus (part.), Schleg. Ned. Tijdschr. Dierk. iv. p. 4 (1871); id. Mus. P.-B. Psittaci, Revue, pp. 18 and following (b, specimens from Jobi) (1874); Rosenb. (nec. Shuw), Reist. naur Geelvinkb. p. 55 (1875); id. Zoolog. Gart. 1878, p. 345 (partim).

Pionias pucherani, var. jobiensis, Meyer, Sitzb. k. Ak. Wissensch. Wien, lxx. p. 225 (1874) (type examined).

Pionias pucherani (part.), Meyer, Sitzb. Isis Dresd. 1875, p. 77. Geoffroyus jobiensis, Salvad. Ann. Mus. Civ. Gen. x. p. 30, n. 41 (1877); id. Orn. Pap. e Mol. i. p. 187 (1880); Guillem. P. Z. S. 1885, p. 620; Büttik. Not. Leyd. Mus. viii. p. 61 (1886); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 164 (1889). Rhodocephalus jobiensis, Rchnw. Journ. f. Orn. 1881, p. 250 (Consp.,

Psitt. p. 138); id. Vogelbild. Nachtr. 66 (1883).

Very much like G. pucherani, from which it differs in having the uropygium of a brighter red, the axillaries and under wing-coverts of a much brighter blue, the interscapular region washed more or less with brown; also in this species there is sometimes a brown spot on the smaller wing-coverts. The female has a brown head like that of G. pucherani. Total length 10 inches, wing 6.8, tail 3.1, bill 0.85, tarsus 0.65.

*Hab.* Jobi Island.

a. ♂ ad. sk. Ansus, Jobi (Dr. A. B. Meyer). Tweeddale Coll, (Typical specimen.)

# 10. Geoffroyus mysorensis.

Eclectus personatus (part.), Schleg. Ned. Tijdschr. Dierk. iv. p. 4 (1871); id. Mus. P.-B. Psittaci, Revue, p. 18 (b, specim. from Mysore, p. 21) (1874); Rosenb. Zoolog. Gart. 1878, p. 345 (partim). Pionias pucherani, var. mysorensis, Meyer, Sitzb. k. Ak. Wissensch. Wien, lxx. p. 225 (1874) (type examined).

Pionias pucherani, var. maforensis, Meyer, Sitzb. k. Ak. Wissensch.

Wien, lxx. p. 225 (1874) (type examined).

Pionias pucherani (part.), Meyer, Sitzb. Isis Dresd. 1875, p. 77. Geoffroyus mysorensis, Salvad. Ann. Mus. Civ. Gen. x. p. 30, n. 42 (1877); id. Orn. Pap. e Mol. i. p. 188 (1880); Büttik. Not. Leyd. Mus. viii. p. 61 (1886); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 164 (1889).

Geoffroyus maforensis, Salvad. Ann. Mus. Civ. Gen. x. p. 30, n. 43

(1877).

Rhodocephalus mysorensis, Rehnw. Journ. f. Orn. 1881, p. 251 (Consp. Psitt. p. 139); id. Vogelbild. Nachtr. 66 (1883).

Similar to G. pucherani, but of a much darker green colour: under wing-coverts and axillaries of a much deeper blue; brownred spot on the wing-coverts always present and very conspicuous.

The male has the blue colour on the hind part of the head generally deeper than in G. pucherani, and extended lower down on the hind part of the cheeks; also the red colour of the chin extends lower down on the throat. The female has the brown-ehestnut colour of the head darker than the female of G. pucherani. Total length 10.2 inches, wing 6.7, tail 3.1, bill 0.85, tarsus 0.7.

Hab. Mysori Island, in Geelvink Bay.

Kordo, Mysori (Dr. A. B. Meyer). Tweeddale Coll.  $a. \ \ 2$  ad. sk. (Typical specimen.)

## 11. Geoffroyus dorsalis.

Geoffroyus dorsalis, Salvad. Ann. Mus. Civ. Gen. vii. p. 758 (1875), x. p. 30, n. 44 (1877); id. Orn. Pap. e Mol. i. p. 190 (1880); Büttik. Not. Leyd. Mus. viii. p. 61 (1886); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 164 (1889).

Rhodocephalus dorsalis, Rehnw. Journ. f. Orn. 1881, p. 251 (Consp.

Psitt. p. 139).

Female. Green; head maroon; forehead and front part of the cheeks slightly greyish; chin greenish; interscapular feathers yellowish green, broadly edged with reddish brown; uropygium brown-red; upper tail-coverts, underparts, and tail yellowish green; wings green, a brown-red spot on the smaller wing-coverts; quills underneath dusky; the innermost secondaries near the scapulars yellowish on the inner web; under wing-coverts and axillaries bright blue: bill and feet dusky. Total length 10.2 inches, wing 6.6, tail 2.8, bill 0.83, tarsus 0.65.

Hab. New Guinea, near Andai.

This species is only known from the type-specimen in the Museum of Genoa, apparently a female; and it is not impossible that, notwithstanding the differences noted, it may turn out to be an accidental variety of G. pucherani: a most peculiar character is the yellowish tinge on the inner web of the innermost secondaries near the scapulars, a feature that G. dorsalis has in common with G. simplex and G. heteroclitus.

# 12. Geoffroyus cyanicollis.

Psittaeus cyanicollis, S. Müll. Verh. Land- en Volkenk. p. 108 (1839–1844) (type examined); Wagner, Arch. f. Naturg. 1842, 2, p. 79; G. R. Gr. Gen. B. ii. p. 421, n. 36 (1846); id. List Psitt. Brit. Mus. p. 73 (1859); Finsch, Nen-Guin. p. 156 (1865).

Psittacus (Psittacula) cyanicollis, S. Müll. Verh. Land- en Volkenk. p. 182 (1839-1844).

Psittacula cyanicollis, G. R. Gr. Gen. B. ii. p. 423, n. 26 (1846); Pelz. u. Lor. Ann. d. naturh. Hofmus. iii. p. 40 (1878).

Geoffroyus cyanicollis, *Bp. Consp.* i. p. 6 (1850); *id. Compt. Rend.* xxx. p. 137 (1850); *id. Rev. et Mag. de Zool.* 1854, p. 155, n. 288 id. Naumannia, 1856, Consp. Psitt. n. 238; Souancé, Rev. et Mag. de Zool. 1856, p. 218; Sclat. P. Z. S. 1860, p. 227; Rosenb. Journ. f. Orn. 1862, p. 62; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 141, 142 (1863); Wall. P. Z. S. 1864, p. 283; Salvad. Ann. Mus. Civ. Gen. vii. p. 757 (1875); Salvad. e D'Alb. Ann. Mus. Civ. Gen. vii. p. 811 (1875); Salvad. op. cit. x. p. 30, n. 45 (1877); id. Orn. Pap. e Mol. i. p. 191 (1880); Rehnw. Vogelbild. t. xxvii. f. 7, 8 (1878-83); Guillem. P. Z. S. 1885, p. 563; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 164 (1889); Tristr. Cut. Coll. B. p. 78 (New Guinea!) (1889).

Psittacus (Geoffroyus) cyaneicollis, G. R. Gr. P. Z. S. 1860, p. 358. Eclectus cyanicollis, Schleg. Mus. P.-B. Psittaci, p. 44 (1864); id. Ned. Tijdschr. Dierk. iii. p. 334 (partim) (1866); id. Mus. P.-B. Psittaci, Revue, p. 22 (1874); Gieb. Thes. Orn. ii. p. 74 (1875);

Rosenb. Zoolog. Gart. 1878, p. 345 (partim).

Pionias cyanicollis, Finsch, Papag. ii. p. 387 (1868). Geoffroy cyanicollis, G. R. Gr. Hand-list, ii. p. 160, n. 8275 (1870). Rhodocephalus cyanicollis, Rehnw. Journ. f. Orn. 1881, p. 248 (Consp. Psitt. p. 136).

Adult male. Green; interscapular region, lower back, and sides of the breast more or less tinged with brown-olive; forehead and cheeks red; crown and ear-coverts tinged with lilac; a broad eollar round the nape greenish blue; a bluish tinge also in front of the neck; lower breast and abdomen green with a slight tinge of blue; under tail-coverts yellowish green, edged with bluish towards the tip; wings green, with an obsolete brown spot on the smaller upper wing-coverts; axillaries and under wing-coverts blue, the same colour appears along the cubital and carpal edges of the wing; quills underneath blackish; tail yellowish green: upper mandible red, under mandible reddish brown or black; feet dusky. Total length 11.4 to 11.8 inches, wing 7.1, tail 7.7, bill 0.95, tarsus 0.7.

Adult female. Differs from the male in having the head dusky grey, tinged with lilac on the vertex, and with olive on the lower part of the cheeks and on the chin; bill dusky. In size somewhat

smaller than the male.

Hab. The Moluccas—Halmahera, Batchian, Morty.

a, b. Ad. sk. c. Ad. sk. d. Ad. sk. e-h. d ♀ ad. sk. i. Ad. sk. Halmahera (H. Rosenberg). Gilolo (A. R. Wallace). Gilolo. Batchian. Batchian (A. R. Wallace).

Tweeddale Coll. Tweeddale Coll. Wallace Coll. Wallace Coll. Gould Coll.

## 13. Geoffroyus obiensis.

Eclectus cyanicollis, var. b, Schleg. Ned. Tijdschr. Dierk. iii. p. 334 (1866).

Pionias obiensis, Finsch, Papag. ii. p. 389 (1868) (types examined). Geoffroy obiensis, G. R. Gr. Hand-list, ii. p. 160, n. 8279 (1870).

Eclectus cyanicol.is, part., Schleg. Mus. P.-B. Psittaci, Revue, p. 22 (1874); Gieb. Thes. Orn. ii. p. 74 (partim) (1875); Rosenb. Zoolog. Gart. 1878, p. 345 (partim).

Geoffroyus obiensis, Salvad. Ann. Mus. Civ. Gen. x. p. 30, n. 46 (1877); id. Orn. Pap. e Mol. i. p. 193 (1880); Rehnw. Pogelbild. in the text of pl. xxvii. (1878-83); Guillem. P. Z. S. 1885, p. 363; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 164 (1889). Rhodocephalus obiensis, Rehnw. Journ. f. Orn. 1881, p. 249 (Consp.

Psitt. p. 137).

Differs from G. cyanicollis only in having the uropygium brownred.

Hab. Obi group and Batchian.

This species is not confined to the Obi group; I have seen the two specimens from Batchian, collected by Dr. Guillemard, which have a brown-red spot on the rump, like those from Obi.

### 14. Geoffroyus heteroclitus.

Psittacus geoffroyi heteroclitus, Hombr. et Jacq. Ann. Sc. Nat. xvi. p. 319 (1841) (types examined).

Pione hétéroclite, Hombr. et Jacq. Voy. Pôle Sud, Atlas, pl. 25 bis,

f. 1 ( $\emptyset$ ), 2 ( $\mathbb{Q}$ ) (1846).

Psittacus heteroclitus, G. R. Gr. Gen. B. ii. p. 421, n. 8 (1846); id.

List Psitt. Brit. Mus. p. 73 (1859). Pionus heteroclitus, Jacq. et Pucher. Voy. Pôle Sud, iii. p. 103 (3) (1853); Hartl. Journ. f. Orn. 1854, p. 165; Sclat. P. Z. S. 1869, p. 118; ? Finsch, Ibis, 1881, p. 538.

Pionus cyaniceps, Jacq. et Pucher. Voy. Pôle Sud, Zool. i. p. 105 (2) (1853); Hartl. Journ. f. Orn. 1854, p. 165; Schit. P. Z. S. 1869,

p. 118.

Geoffroyus heteroclitus, Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 229; id. Naumannia, 1856, Consp. Psitt. n. 237; Souance, Rev. et Mag. de Zool. 1856, p. 118; Sclat. P. Z. S. 1869, pp. 122, 124; Salvad. Ann. Mus. Civ. Gen. x. p. 30, n. 47 (1877); Gould, B. New Guin. pt. viii. pl. 5 (1878); Sclat. P. Z. S. 1878, p. 672; Tristr. Ibis, 1879, p. 442; Ramsay, Pr. Linn. Soc. N. S. W. iv. p. 68 (1879); id. Nature, xx. 1879, p. 125; Salvad. Orn. Pap. e Mol. i. p. 194 (1880); Rehnw. Vogelbild. t. xxvii. f. 2 (1878–83); Ramsay, Pr. Linn. Soc. N. S. W. vii. pp. 33, 666; Tristr. Ibis, 1882, pp. 138, 143; Grant, P. Z. S. 1887, p. 329, 1888, p. 189; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 164 (1889); Tristr. Cat. Coll.

B. pp. 78, 79 (1889). Geoffroyus cyaniceps, Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 229 bis; Sclat. P. Z. S. 1877, p. 107 (New Britain), 1878, p. 672 (New

Britain).

Psittacus (Geoffroy) heteroclitus, G. R. Gr. Cat. B. Trop. Isl. p. 34 (1859).

Pionias heteroclitus, Finsch, Papag. ii. p. 390 (1868); id. P. Z. S. 1869, p. 127; Gieb. Thes. Orn. iii. p. 190 (1876).

Geoffroy heteroclitus, G. R. Gr. Hand-list, ii. p. 160, n. 8277 (3) (1870).

Geoffroy cyaniceps, G. R. Gr. Hand-list, ii. p. 160, n. 8278 ( $\mathfrak{P}$ ) (1870).

Pionias cyaniceps, Finsch, P. Z. S. 1879, p. 12.

Rhodocephalus heteroclitus, Rchnw. Journ. f. Orn. 1881, p. 248

(Consp. Psitt. p. 136).

Geoffroyus agrestis, Tristr. Ibis, 1882, pp. 138, 143, n. 69 (young; San Cristoval); Ramsay, Ibis, 1882, p. 472; id. Pr. Linn. Soc. N. S. W. vii. p. 42 (1882); Salvad. Ann. Mus. Civ. Gen. xviii. p. 418, n. 7 (1882); id. Orn. Pap. e Mol. iii. p. 517 (1882); id. Mem. R. Ac. Soc. Tor. (2) xl. p. 164 (1889); Tristr. Cat. Coll. B. p. 78 (1889).

Rhodocephalus agrestis, Rchnw. Vogelbild. Nachtr. 64 (1883).

Adult male. Green, underneath yellowish green; head yellow;

collar round the neck grey, with a slight tinge of bluish; a pale brown spot on the smaller wing-coverts; quills with a narrow yellow edge on the inner web; innermost secondaries near the scapulars with a yellowish-white spot on the inner web; primary-coverts green, edged with blue; under wing-coverts blue; tail green above, golden olive underneath, the tip and the inner web of the tail-feathers narrowly edged with yellow: "iris pale yellow; upper mandible yellow, under mandible black; feet grey" (Woodford). Total length 10.5 inches, wing 6.4, tail 3.3, bill 0.85, tarsus 6.

Female. Differs from the male in having the head greenish, with a bluish-grey tinge above; there is no yellow colour on the head, and no bluish-grey collar round the neck: "bill black; legs grey; iris pale yellow" (Woodford). Of nearly the same size as the male.

Young (type of G. agrestis). The upper part of the head is green like the back; cheeks also greenish; body, wings, and tail as in the adult bird: "iris drab; feet greenish drab; bill brownish orange" (Richards). (Mus. Tristram.)

Hab. Solomon Islands-St. George, Isabel, Lava, Guadalcanar,

San Cristoval; New Britain and New Ireland.

 $a, b, \beta \circ ad. sk.$ San Cristoval. T. C. Cockerell [C.]. C. M. Woodford, Esq. c. ♂ ad. sk. Guadalcanar, July. P. L. Sclater, Esq. d, e. Imm. sk. Solomon Islands. [P.] f. Ad. sk. New Britain (Rev. G. Brown). Tweeddale Coll. Rev. G. Brown [C.]. g, h. Imm. sk. New Britain. i. Ad. sk. New Ireland. Rev. G. Brown | C. j.

## 15. Geoffroyus simplex.

Pionias simplex, Meyer, Verh. k. z.-b. Gesellsch. Wien, lxx. p. 39 (1874) (type examined); id. Sitzb. k. Ak. Wissensch. Wien, lxix. p. 74 (1874); Sclat. Ibis, 1874, p. 419; Meyer, Sitzb. Isis Dresd.

1875, p. 77.

Geoffroyus simplex, Salvad. Ann. Mus. Civ. Gen. vii. p. 759 (1875), x. p. 30, n. 48 (1877), p. 120, n. 15 (1877); Gould, B. New Guin. pt. v. pl. 7 (1877); Salvad. Orn. Pap. e Mol. i. p. 196 (1880); Rchnw. Vogelbild. t. xxvii. f. 1 (1878–83); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 165 (1889).

Rhodocephalus simplex, Rchnw. Journ. f. Orn. 1881, p. 247 (Consp.

Psitt. p. 135).

Adult male (type). Green; back brownish; rump washed with blackish; under surface of body lighter green; round the neck a collar of light blue, somewhat shaded with lilae under certain lights, and broader and less defined on the nape; wings green; the inner webs of the quills black; under wing-coverts sky-blue, this colour descending somewhat on the sides of the chest; under surface of the quills blackish, the innermost secondaries nearer to the scapulars with a pale yellow spot on the inner web; on the edge of the

wings a yellowish-white spot; wing-coverts with a slight patch of yellowish brown; cheeks and chin paler green, like the under surface; abdomen shaded with brown; under tail-coverts pale green shaded with yellowish; upper surface of the tail green, below greenish yellow; bill, cere, feet, and nails black. Total length 11.4 inches, wing 6.4, tail 3.6, bill 1, tarsus 0.56.

Female. Like the male, but smaller, with no bluish collar, the pileum and cheeks slightly tinged with bluish; upper parts with no blackish tinge: "iris pale yellow; bill black; feet greenish or lead-colour" (D'Albertis). Total length 9.4 inches, wing 6,

tail 3.35.

Hab. New Guinea, from the Arfak Mountains to East Cape.

A specimen from East Cape collected by Mr. C. Hunstein seems to belong to this species, although it has no brownish or blackish tinge either on the back or on the wings and abdomen; it is labelled female, but as it has a bluish-grey collar, better defined in front of the neck, I should say that it is a male. It may, however, be different from the Arfak bird.

 $\alpha$ .  $\lceil \mathcal{Q} \rceil$  ad. sk.

East Cape, New Guinea. Hr. C. Hunstein [C.].

suluensis, p. 419.

#### 32. PRIONITURUS.

Type. Prioniturus, Wagl. Mon. Psitt. p. 490 (1832) . . . . . . P. platurus. Urodiscus, Bp. Rev. et Mag. de Zool. 1854, p. 155 . . . . P. discurus. P. platurus.

Runge. From the Philippines, including Palawan and the Sooloo Islands, to the Sanghir Islands, Celebes, the Togian Islands, and Bouton Island.

## Key to the Species.

J	
<ul> <li>a. General colour green, but not yellow-green.</li> <li>a'. Wing-coverts greenish grey; a golden-yellow band across the interscapular region; a red spot on the vertex; occiput bluish grey</li> <li>b'. Wing-coverts green.</li> <li>a''. The head entirely green in the adult bird.</li> <li>b''. The head not entirely green in the adult</li> </ul>	
bird.  a". Head partly blue.  a <sup>4</sup> . Neck and breast olive-brown.  a <sup>5</sup> . Crown blue, with a red spot in the middle  b <sup>5</sup> . Crown blue, with no red spot  b <sup>1</sup> . No olive-brown colour on the breast; no red spot on the middle of the crown.	flavicans &, p. 416. flavicans \$2, p. 416.
c <sup>5</sup> . Blue or violet colour of the head confined to the crown.  a <sup>6</sup> . Crown blue.  a <sup>7</sup> . Crown blue to the occiput; forehead green  b <sup>7</sup> . Crown from the anterior margin	[p. 417.

of the forehead to the occiput blue

b<sup>6</sup>. Crown and occiput violet (Steere). d<sup>5</sup>. Crown, forehead, and cheeks tinged with blue; occiput and nape green. b'''. Head entirely verditer-blue . . . . . . . . b. General colour above and below, including the head, yellow-green .....

mindorensis, p. 419.

cyaneiceps Q, p. 419. cyaneiceps & , p. 419.

luconensis, p. 420.

### 1. Prioniturus platurus.

Psittacus platurus, Temm. fide Vieill. N. D. xxv. p. 314 (Nouvelle Caledonie!) (1817); Kuhl, Consp. Psitt. p. 43 (Nouvelle Caledonie!) (1820); Vicill. Enc. Méth. iii. p. 1367 (1823); G. R. Gr. Cat. B. Trop. Isl. p. 31 (1859).

Racket-tailed Parrot, Lath. Gen. Hist. ii. p. 167, pl. 24 (1822).

Psittacus setarius, Temm. Pl. Col. 15 (Timor!) (1824); Less. Man. d'Orn. ii. p. 151 (Timor!, Philippines!) (1828); Voigt, Cuv. Uebers. p. 736 (1831); Müll. & Schleg. Verh. Land- en Volkenk. pp. 90, 107, 182 (1839–44).

Platycercus? setarius, Steph. Gen. Zool. xiv. 2, p. 124 (1826).

Psittacus discurus, part., Less. Tr. d'Orn. p. 201 (1831). Prioniturus platurus, Wagl. Mon. Psitt. p. 523 (1832); G. R. Gr. Gen. B. ii. p. 408 (syn. emend.) (1846); Bp. Consp. Av. i. p. 6 (1850); id. Rev. et Mag. de Zool. 1854, p. 153, n. 153; id. Naumannia, 1856, Consp. Psitt. n. 151; G. R. Gr. List Psitt. Brit. Mus. p. 17 (1859); Wall. Ibis, 1860, p. 141; Rosenb. Journ. f. Orn. 1862, p. 60; id. Nat. Tijdschr. Ned. Ind. xxv. p. 139 (1863); Sonsa, Mus. Nac. Lisboa, Psittaci, p. 15 (1869); G. R. Gr. Handlist, ii. p. 141, n. 8046 (1870); Sundev. Meth. nat. Av. disp. Tent. p. 69 (1872); Wald. Tr. Zool. Soc. viii. p. 32 (1872); Salvad. Ann. Mus. Civ. Gen. vii. p. 645 (1875); Brüggem. Abh. Brem. v. p. 39 (Celebes, Sanghir) (1876); Koch, Verz. Samml. Vogelb. aus Celebes u. Sanghir, Feb. 1876, p. 1; Lenz, Journ. f. Orn. 1877, p. 362; ? Rosenb. Malay. Archip. p. 274 (1878); Meyer, Ibis, 1879, pp. 49, 145; Rclaw. Vogelbild. t. xxvii. f. 5; id. Journ. f. Orn. 1881, p. 255 (Consp. Psitt. p. 143); Blas. Journ. f. Orn. 1883, p. 134; Meyer, Sitzb. u. Abh. Ges. Isis, 1884, Abh. i. p. 6; Guillem. P. Z. S. 1885, p. 543; Blas. Zeitschr. f. ges. Orn. 1885, p. 212, figs. 1, 2, 4, 5, 6; id. Ornis, iv. p. 559 (1888); Tristr. Cat. Col. B. p. 75 (1889)

Psittacus spatuliger, mas, Bourj. Perr. pl. 53 (1837–38).

Prioniturus wallacei, Gould, MS.; G. R. Gr. List Psitt. Brit. Mus. p. 18 (Makasar) (1859); Schley. Dierent. p. 70 (with figure) (1864); G. R. Gr. Hand-list, ii. p. 141, n. 8044 (1870).

Prioniturus setarius, Sclat. P. Z. S. 1860, pp. 223, 226; Gould, B. of Asia, vi. pl. 12 (pt. xiv., 1862); Wall. P. Z. S. 1864, pp. 284, 293;

Rosenb. Malay. Archip. p. 274 (1878).

Coll. B. p. 75 (1889).

Eelectus platurus, Schleg. Mus. P.-B. Psittaci, p. 45 (1864); id. ov. cit. Revue, p. 22 (Celebes, Siao, Bouton, Bourn) (1874); Rosenb. Zool. Gart. 1878, p. 345.

Pionias platurus, Finsch, Papag. ii. p. 395 (1868). Eclectus platyurus, Gieb. Thes. Orn. ii. p. 76 (1875).

Adult. Sinciput, sides of the head, neck, and underparts green; the underparts, especially the under tail-coverts, with a yellowish tinge; a band across the vertex red; occiput bluish grey; a goldenyellow band across the interscapular region; back and scapulars greenish grey; uropygium and upper tail-coverts green; upper

wing-coverts greenish grey, tinged with delicate bluish grey near the bend of the wing; primaries and their coverts dark green; secondaries paler green, edged with yellowish, the innermost ones, near the scapulars, yellowish white on the inner web; middle tail-feathers green, with the spatula green, blue in the middle; lateral tail-feathers green, with the apical third deep blue; quills and tail-feathers underneath verditer-green: "iris brown; bill lead-colour; feet greyish" (Guillemard). Total length to the tip of the middle tail-feathers about 13 inches, to the tip of the lateral fail-feathers 10.5, wing 7, middle tail-feathers 6.5, lateral tail-feathers 3.6, bill 0.95, tarsus 0.62.

Adult female. Wants the red spot on the vertex, the bluish-grey patch on the occiput, the yellow band across the interscapular region, and the grey tinge on the back, on the scapulars, and on the upper wing-coverts, all those parts being green, like the remainder of the upper parts; underparts and tail as in the adult male, only the two racketted middle tail-feathers shorter, their length ranging between 5 and 4.7 inches.

Young birds resemble the adult females, but have the two middle tail-feathers not much longer than the lateral ones, narrow towards the point, but webbed through their whole length and without a

distinct spatula.

Hab. Celebes, Togian Islands, Siao, and Bouton.

Prof. Schlegel mentions a specimen from Bouru, but I doubt the accuracy of the statement. The specimens from Siao have been described by Prof. Schlegel as somewhat different, having the red patch on the vertex broader, and the yellow band across the interscapular region broader and brighter.

a. Ad. sk.	Celebes.	Tweeddale Coll.
b, c, d. d. Ask.	Celebes.	Gould Coll.
e, f. Ad. sk.	Celebes.	R. B. Sharpe, Esq., LL.D. [P.].
g, h. ♀ ad. et imm. sk.	Celebes.	Dr. A. B. Meyer [C.].
i. Ad. sk.	Celebes.	Salvin-Godman Coll.
k. Ad. sk.	Menado, N. Celebes.	Tweeddale Coll.
<i>l</i> . ♂ ad. sk.	Menado (Wallace).	Tweeddale Coll.
$m, n. \ \  \   \   $ $\  \  $ $\  \  $ $\  \  $ ad. sk.	Menado (v. Duiven- bode).	Tweeddale Coll.
o. ♀ ad. sk.	Menado.	Wallace Coll.
p, q. Ad. st.	Macassar, S. Celebes (Wallace).	Gould Coll. (Types of P. wallacei, Gould.)
$r, s. \ \  \  \  \  \  \  \  \  \  $ ad. sk.	Macassar.	Wallace Coll.
$t, u. \ $ ad. sk.	Sanghir Islands.	Purchased.

#### 2. Prioniturus flavicans.

Prioniturus flavicans, Cass. Pr. Acad. Nat. Sc. Philad. vi. p. 73 (1853); id. Journ. Acad. Philad. iii. p. 155 (1855); Bp. Naumannia, 1856, Consp. Psitt. n. 152; G. R. Gr. List Psitt. Brit. Mus p. 18 (1859); Sclat. P. Z. S. 1800, pp. 223, 226 (syn. cmerd.); Gould, B. of Asia, vi. pl. 13 (pt. xiv., 1862); Wall. P. Z. S. 1864, pp. 284, 293; Sousa, Mus. Nac. Lisboa, Psittaci, p. 15 (1869);

G. R. Gr. Hand-list, ii. p. 141, n. 8045 (1870); Wald. Tr. Zool. Soc. viii. p. 32 (1872); Brüggem. Abh. Brem. v. p. 40 (1876); Lenz, Journ. f. Orn. 1877, p. 363; Meyer, Ibis, 1879, pp. 51, 145; Rehnw. Vogelbild. t. xxvii. f. 4 (1878–83); id. Journ. f. Orn. 1881, p. 255 (Consp. Psitt. p. 143); Blas. Journ. f. Orn. 1883, p. 134; Meyer, Sitzl. u. Abh. Ges. Isis, 1884, Abh. i. p. 6; Guillem. P. Z. S. 1885, p. 543; Blas. Zeitschr. f. ges. Orn. 1885, pp. 212, 213, figs. 3, 7, p. 218 (fig. of the head), 1886, p. 83; id. Ornis, iv. p. 560 (1888).

Prioniturus discurus, Wall. (nec Vieill.) Ibis, 1860, p. 141 (N. Celebes). Psittacus discosurus, Temm. (nec Vieill.) in Mus. Lugd. (fide Sclater,

Eclectus flavicans, Schleg. Mus. P.-B. Psittaci, p. 45 (1864); id. op. cit Revue, p. 24 (1874); Gieb. Thes. Orn. ii. p. 74 (1875).

Pionias flavicans, Finsch, Papag. ii. p. 399 (1868).

Prioniturus flavinuchus, Rosenb. Reise nach Celebes (fide Finsch, *Papag.* ii, p. 401).

Adult male. Green, head brighter; neck, interscapular region, and upper breast olive-brown; pileum blue, with a bright red spot on the vertex; back, scapulars, uropygium, upper tail-coverts, and wings green; lower breast, abdomen, and under tail-coverts paler green; first primary edged with bluish green on the outer web; tail above green, with a black band at the tip of the lateral feathers; spatule of the two middle tail-feathers black; tail and quills underneath verditer-green: "bill whitish slate; tarsus slate" (Guillemard). Total length from the bill to the tip of the two middle tail-feathers about 15.6 inches, to the tip of the lateral tailfeathers 12.2, wing 7.4, middle tail-feathers 6.8, lateral tail-feathers 3.8, bill 0.96, tarsus 0.7.

Adult female. Similar to the male, but wants the red spot on the vertex; the blue colour of the pileum is less extended and not so bright.

Young. Like the female, but the two middle tail-feathers, which are longer than the lateral ones and narrower at the tip, have the webs entire, so that there is no distinct spatule.

Hab. Celebes, Togian Islands, and perhaps also the Sanghir Islands.

a, b, c. ♂♀ad. sk.	Menado, N. Celebes.	Wallace Coll.
d, e. Ad. sk.	Menado (A. R. Wal-	Tweeddale Coll.
,	lace). `	
f. of ad. sk.	Celebes.	Gould Coll.
g. Ad. sk.	Celebes.	Purchased.
h, i. Ad. sk.	Celebes.	R. B. Sharpe, Esq., LL.D.
,		[P.].
k. Ad. sk.	Celebes.	Zoological Society's Coll.

#### 3. Prioniturus discurus.

Psittacus discurus, Vieill. Gal. des Ois. i. p. 7, pl. 26 (previous to 1823) (Mindanao); *id. Enc. Méth.* iii. p. 1369 (1823). Psittacus discosurus, *Wayl. Mon. Psitt.* p. 524 (1832).

Psittacus spatuliger, fæm., Bourj. Perr. pl. 53 bis (Mindanao) (1837-38).

9. 3 ad. sk.

Prioniturus discosurus, Bp. Consp. Av. i. p. 6 (1850).

Urodiscus spatuliger, Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 226; G. R. Gr. Hand-list, ii. p. 141, n. 8048 (1870) (Manilla).

Urodiscus spatulifer, Bp. Naumunnia, 1856, Consp. Psitt. n. 233. Prioniturus discurus, G. R. Gr. List Psitt. Brit. Mus. p. 18 (1859; Philippine Isl.); Sclat. P. Z. S. 1860, p. 224; Gould, B. of Asia, vi. Printppine 181.); Scial. I. Z. S. 1800, p. 224; Goula, B. of Asia, VI. pl. 15 (pt. xiv., 1862); v. Mart. Journ. f. Orn. 1866, p. 22; Wald. Tr. Zool. Soc. ix. pp. 132, 249 (part.) (1875); Sharpe, Tr. Linn. Soc. (2) Zool. i. p. 312 (1876); Tweedd. P. Z. S. 1877, pp. 538, 756, 817, 1878, pp. 379, 937, 1879, p. 68; Tweedd. Voy. Chall., Birds, p. 9 (1881); id. Orn. Works, pp. 300 (part.), 410, 461, 462, 530, 544, 602, 628, 646 (1881); Wardl.-Rams., Tweedd. Orn. Works, p. 655 (1881); Rehnw. Voyelbild. t. xxvii. f. 3 (1878-28), id. Leven f. Org. 1881, p. 154 (Const. Psitt. p. 149). Tristr. 83); id. Journ. f. Orn. 1881, p. 154 (Consp. Psitt. p. 142); Tristr.

Cut. Coll. B. p. 75 (1889); Steere, List, p. 6 (1890). (Manilla) (1859); Gould, B. of Asia, vi. pl. 14 (pt. xiv., 1862); Wall. P. Z. S. 1864, p. 294; Mart. Journ. f. Orn. 1866, p. 22. Prioniturus, sp., Wall. P. Z. S. 1864, p. 284.

Pionias discurus, Finsch, Papag. ii. p. 401 (1868); Gieb. Thes. Orn. iii. p. 190 (1875).

Urodiseus discurus, G. R. Gr. Hand-list, ii. p. 141, n. 8047 (1870).

Adult male. Green, the wings a little darker, the underparts yellowish green; pileum bright blue; two middle tail-feathers green, with the spatule black, tinged with blue; lateral tailfeathers blue, more or less green on the outer web and black at the tip; tail and quills underneath verditer-green: iris grey; bill whitish; feet dark grey. Total length from the bill to the tip of the middle tail-feathers 12 to 13 inches, to the tip of the lateral tail-feathers 9 to 10, wing 6 to 6.3, middle tail-feathers 6.5, lateral tail-feathers 3.1, bill 0.82 to 0.85, tarsus 0.6.

Female. Smaller, but otherwise not different from the male.

Young. With no green colour, or searcely any on the pileum, and probably with the middle tail-feathers not spatulated.

Hab. The Philippines; it does not extend to Palawan. There is a good deal of individual variation in size

Zamboanga.

There is a good	u deal of individual variation	11 111 5126.
a, b. Ad. et imm.	Manilla.	Gould Coll.
st. c. Ad. st.	Manilla.	Purchased.
	Philippine Islands.	W. B. Pryer, Esq. [P.]
e. Ad. sk.	Philippine Islands.	Purchased.
f. 3 ad. sk.	Luzon, Feb. (A. B. Meyer).	Tweeddale Coll.
y, h. ♂♀ ad. sk.	Guimaras, March (A. B. Meyer).	Tweeddale Coll.
i, k. ♂♀ ad. sk.	Cebu, April (A. H. Ererett).	Tweeddale Coll.
1. 3 ad. sk.	Panaon, Oct. (A. H. Ev-	Tweeddale Coll.
	erett).	
$m. \ \ $ 2 ad. sk.	Negros, Jan.	Steere Coll.
n. Åd. sk.	Mindanao.	Gould Coll.
o. & imm. sk.	Surigao, June (A. H. Everett).	Tweeddale Coll.
a Z ad sk	Placer, July (A. H. Ererett).	Tweeddale Coll.

'Challenger' Exped.

 $r. \ \$  ad. sk. Zamboanga, April (A. H. Tweeddale Coll. Everett).

8. Ad. sk. Zamboanga. Tweeddale Coll. Tweeddale Coll. Tweeddale Coll.

 $t, u. \ \mathcal{J} \ Q \ \text{ad. sk.}$  Basilan, June (A. H. Ev
Tweeddale Coll.

#### 4. Prioniturus suluensis.

Prioniturus discurus, Sharpe (nec Vieill.), P. Z. S. 1879, p. 313 (Sooloo Islands); Guillem. P. Z. S. 1885, p. 251.

Prioniturus discurus, yar. suluënsis, *Blas. Journ. f. Orn.* 1890, p. 140 (Sulu Inseln).

Court much libra

Very much like *P. discurus*, from which it differs in being larger and in the greater extension of the blue colour on the crown, where it begins from the anterior edge of the forehead and extends to the occiput; also the lores are bluish green; on the nape and upper part of the back there is a very distinct olive patch, of the same colour as the underparts. Total length 13.5 inches, wing 6.4, central tail-feathers 6.5, lateral tail-feathers 3, bill 0.9, tarsus 0.68. *Hab.* Sooloo Islands.

a. Ad. sk. Sooloo Islands. II. Veitch, Esq. [P.]

#### 5. Prioniturus mindorensis.

Prioniturus mindorensis, Steere, List B. & M. Steere Exped. to the Philipp. p. 6 (1890).

Adult male. General colour grass-green as in P. discurus; crown and nape violet; lores, face, and chin yellow-green (Steere).

Hab. Mindoro.

## 6. Prioniturus cyaneiceps.

Prioniturus platenæ\*, Blas. Braunschweigische Anzeiger, no. 37, Febr. 12 (1888), p. 335; id. Ornis, iv. p. 305 (1888); id. Ibis, 1888, pp. 372, 374.

Prioniturus cyaneiceps, Sharpe, Ibis, April 1888, p. 194 (Palawan); Whiteh. Ibis, 1890, p. 42: Everett, Journ. Str. Er. R. As. Soc. 1880, p. 176; Steere, List, p. 6 (1890).

Adult male. Green; the whole of the head and neck pale verditerblue; feathers of the underparts yellowish green, washed on the edges with verditer-blue; middle of the abdomen more yellowish; under tail-coverts greenish yellow; bastard-wing, primary-coverts, and quills green, with a bluish tinge internally; innermost secondaries near the scapulars whitish yellow on the inner web; middle tail-feathers green, the shaft and the spatule black; lateral tail-feathers above bluish along the middle, mostly green on the outer web, edged with black on the inner web and black at the tip; tail

 $2 \times 2$ 

<sup>\*</sup> According to the rules followed in the volumes of the 'Catalogue of Birds,' names published in daily or political newspapers cannot stand.

and quills underneath verditer-blue: bill grey; feet dark. Total length 12·4 inches, wing 6·1 to 5·8, middle tail-feathers 5·6, lateral tail-feathers 2·8, bill 0·8, tarsus 0·5.

Female. Has a very slight tinge of blue on the pileum and cheeks; the occiput and nape are bright green; the underparts are yellowish green, with no blue tinge; the bastard-wing and the primary-coverts are green, with no blue tinge, and the lateral tail-feathers with searcely any along the middle; under tail-coverts pure yellow.

Young. Green, with no verditer-blue shade on the head and neck: greater wing-coverts and secondaries edged with yellowish green: underparts yellowish green; under tail-coverts yellow, washed with greenish; middle tail-feathers longer than the lateral

ones, narrow towards the point and entirely webbed.

Hab. Palawan.

a-d. ∃ Q ad. et Palawan, July, August. J. Whitehead, Esq. [C.]. (Typical specimens of P. cyaneiceps, Sharpe.)

#### 7. Prioniturus luconensis.

Prioniturus discurus (part.), Tweedd. Tr. Zool. Soc. ix. p. 132 (1875) (Luzon); id. (nec Vieill.) P. Z. S. 1877, p. 688 (Monte Alban); id. Orn. Works, p. 300 (part.) and p. 514 (nec Vieill.) (1881). Prioniturus luconensis, Steere, List B. & M. Steere Exped. to the

Philipp. p. 6 (1890).

Adult. General colour above and below, including the head, bright yellow-green; quills, except the innermost ones, near the scapulars darker green; first primary edged with blue on the outer web, second bluish green on the outer web; the innermost quills, near the scapulars, with a broad whitish spot on the inner web; quills underneath verditer-green on the inner web; two middle tail-feathers green, with a black-blue spatula at the end; lateral tail-feathers green, deep blue towards the end; tail underneath verditer-green: "iris brown; bill lead-grey" (Everett). Total length from the tip of the bill to the tip of the middle tail-feathers 12.6 to 11 inches, to the tip of the lateral tail-feathers 9.6 to 8.6, wing 5.9 to 5.6, middle tail-feathers 6 or less, bill 0.7, tarsus 0.55.

Immature. Differs from the adult in having the middle tail-feathers with the shaft not naked and with no developed spatula, although the webs become narrower before the end; the tips of the two middle tail-feathers are blue; the lateral tail-feathers have,

towards the end, less blue than in the adult bird.

Hab. Luzon, Philippine Islands.

 $a, b. \ \,$   $\sigma$  ad. sk. Luzon, Jan. (A.B.Meyer). Tweeddale Coll.  $c-f.\ \,$   $\sigma$  ad. et imm. sk. Monte Alban, Feb. (A.H.Everett). Tweeddale Coll.

#### 33. MASCARINUS.

Type.

Mascarinus, Less. Tr. d'Orn. p. 188 (1831)......... M. mascarinus. Muscarinus, G. R. Gr. List Gen. B. p. 50 (1840). Coracopsis, G. R. Gr. (nec Wagl.) List Gen. & Subgen.

B. p. 85, n. 1444 (1855)..... M. mascarinus.

(Cf. Forbes, Ibis, 1879, pp. 303-307.)

Range. The same as that of the species.

### 1. Mascarinus mascarinus.

Psittaeus Mascarinus, Briss. Orn. iv. p. 315 (1760).

Psittacus mascarinus, Linn. Mantiss. p. 524 (1771); Gm. S. N. i. p. 333, n. 49 (1788); Lath. Ind. Orn. i. p. 111, n. 87 (1790); Shaw, Gen. Zool. viii. 2, p. 528 (1811); Bechst. Kurze Ueb. p. 89 (1812); Vieill. N. D. xxv. p. 313 (1817); Kuhl, Consp. Psitt. p. 29 (1820); Vieill. Enc. Méth. iii. p. 1367 (1823); Voigt, Cuv. Vebers. p. 730 (1831); Hahn, Orn. Atl., Papag. p. 54, t. 39 (1835); Brehm, Mon. d. Pap. t. 60 (1854); Selat. P. Z. S. 1857, p. 226; id. Ibis, 1859, p. 320; Schleg. et Poll. Rech. Faun. Madag. p. 157 (1868); A. & E. Newt. Ibis, 1876, p. 285; Rehnw. Jown. f. Orn. 1831, pp. 232, 399 (Consp. Psitt. pp. 120, 230); id. Journ. f. Orn. 1882, p. 126.

Mascarin, D'Aubent. Pt. Enl. 35; Buff. Hist. Nat. Ois. vi. p. 120

(1779).

Mascarine Parrot, Lath. Syn. i. p. 265, n. 72, with var. (note) (1781);

id. Gen. Hist. ii. p. 113, with var. A, p. 214 (1822).

Perroquet Mascarin, Levaill. Perr. ii. p. 171, pl. 139 (1805); Milne-Edw. Ann. Sc. Nat., Zool. (5) vi. p. 105, pl. ii. f. 4, pl. iii. f. 8 (lower mandible) (1866).

Mascarinus madagascariensis, Less. Tr. d'Orn. i. p. 189 (1831); Bp. Consp. Av. i. p. 7 (1850); Hartl. Journ. f. Orn. 1860, p. 107; id. Orn. Beitr. Faun. Madag. p. 59 (1861); A. Newt. Ibis, 1866, p. 171

(note).

Coracopsis mascarina, Wagl. Mon. Psitt. p. 679 (1832); Pelz. Verh. z.-b. Ges. Wien, 1863, p. 934; Hartl. Vög. Madag p. 232 (1877).

Coracopsis muscarina, G. R. Gr. Gen. B. ii. p. 407, n. 1 (1846); id. List Psitt. Brit. Mus. p. 2 (1859).

Mascarinus obscurus, Bp. (nec Linn.?) Rev. et Mag. de Zool. 1854, p. 154, n. 207; id. Naumannia, 1856, Consp. Psitt. n. 210. Vaza mascarina, Schley. Dievent. p. 71 (1864).

Psittacus madagascarensis, Finsch, Papag. ii. pp. 306, 955 (1868).

Psittacus mascarenus, Finsch, ibid. (note).

Coracopsis obscura, G. R. Gr. Hand-list, ii. p. 159, n. 8262 (1870).

Psittacus madagascariensis, Pelz. Ibis, 1873, p. 32; Gieb. Thes. Orn. iii. p. 340 (1877).

Coracopsis mascarinus, A. & E. Newt. Ibis, 1876, p. 289; Oust. Bull. Soc. Philom. (7) ii. p. 165 (1878).

Mascarinus duboisi, Forbes, Ibis, 1879, p. 300, f. 1 (head), p. 304,

figs. 2, 3 (feet), p. 305; Rchnw. & Schal. Journ. f. Orn. 1880, p. 195 \*.

Adult. Upper parts brown, with a greyish tinge; underparts paler; face and throat black; the rest of the head and the hind neck pale grey, with a bluish tinge; wings dark brown; upper and under wing-coverts like the back; tail like the back, but the basal third of the lateral tail-feathers whitish: bill red; feet reddish brown. Total length about 14.6 inches, wing 9, tail 6.3, bill 1.7, height of the bill 1.35, tarsus 0.95.

Hab. Réunion Island.

This bird is now extinct and only two specimens of it are preserved, one in the Museum of Paris and the other in that of Vienna; the latter, which was once in the Leverian Museum, is partially affected by albinism. In 1834 Hahn figured a specimen then living in the Menagerie of the King of Bavaria; unfortunately every trace of it has been lost.

#### 34. TANYGNATHUS.

Type. Tanygnathus, Wagl. Mon. Psitt. p. 501 (1832) . . T. megalorhynchus. Erythrostomus, Sw. Class. B. ii. p. 500 (1837) . . T. megalorhynchus.

Range. From the Philippines through the Sooloo and Sanghir Islands to Celebes, the Moluccas, the Tenimber Islands, the Northwestern Papuan Islands, and the north-western coast of New Guinea.

## Key to the Species.

a. A distinct black band from the forehead to the 

gramineus, p. 423.

the eyes.

a'. Vertex and occiput blue in the adult birds, green in young ones; median wingcoverts black, with broad golden-brown edges; scapulars green, tinged with blue...

luconensis, p. 424.

Obscure Parrot, Lath. Syn. i. p. 206 (1781); id. Gen. Hist. ii. p. 111

(1822).

<sup>\*</sup> Linnaus identified his Psittacus obscurus with P. mascarinus, Briss., and the following quotations have been attributed to this species, but the evidence is against this identification:-

Psittacus obscurus, Hasselq. Iter. p. 236 (1757); Linn. S. N. i. p. 140, n. 4 (partim) (1766); id. Mantiss. p. 524 (1771); Gm. S. N. i. p. 314, n. 4 (1788); Lath. Ind. Orn. i. p. 84, n. 8 (1790); Shaw, Gen. Zool. viii. 2, p. 400 (1811); Vieill. N. D. xxv. p. 342 (1817); Kuhl, Consp. Psitt. p. 96 (1820); Vieill. Enc. Méth. iii. p. 1384 (1823); Wagl. Mon. Psitt. p. 739 (1832) (av. dub.); A. & E. Newt. Ibis, 1876, p. 285; Forbes, Ibis, 1879, p. 306.

b'. No blue colour on the head, which is always wholly green; no broad golden-brown edges to the median upper wing-coverts.

a". Median upper wing-coverts edged with pure golden yellow.

'. Scapulars blackish; median upper wing-coverts black, edged with yellow; smaller upper wing-coverts also black, but edged with blue; underparts distinctly yellowish..... meyalorhynchus, p. 426.

b". Scapulars green, tinged more or less

with blue.

a1. Median upper wing-coverts black; smaller ones green, edged with

coverts green, the last edged with blue ..... subaffinis, p. 429.

b". Median and greater upper wing-coverts edged with yellowish green; bill red in the adults, whitish in the young birds.

c'". Head green, darker than the neck. c4. Upper back yellowish green iu the adult, more or less deep green in the young bird, and less deep blue edges to the with no

blue ..... d'''. Head yellowish green like the neck and lighter than the body; greenish-yellow edges of the upper wingcoverts very narrow ..... burbidgei, p. 432.

everetti, p. 432.

# 1. Tanygnathus gramineus.

Perroquet d'Amboine, D'Aubent. Pl. Enl. 862.

Grand Perroquet vert à tête bleue, Buff. Hist. Nat. Ois. vi. p. 122 (1779).

Amboina Parrot, Lath. Syn. i. p. 279 (1781); id. Gen. Hist. ii. p. 234

(1822).

Psittaeus gramineus, Gm. S. N. i. p. 338, n. 111 (1788) (ex Pl. Enl. 862); Lath. Ind. Orn. i. p. 118, n. 110 (1790); ? Shaw, Gen. Zool. viii. p. 520 (1811); Bechst. Lath. Uebers, p. 95 (1811); Kuhl. Consp. Psitt. p. 84 (1820); Vieill. Enc. Méth. p. 1366 (1823); Steph. Gen. Zool. xiv. p. 107 (1826); Voigt, Cuv. Uebers. p. 743 (1831); Temm. Tabl. Meth. p. 59 (1839); Brehm, Mon. d. Papag. t. 63 (1854); Finsch, Papag. ii. p. 923 & p. 929? (1868); Gieb. Thes. Orn. iii. p. 337 (1876).

Perroquet à calotte bleue, Levaill. Perr. pl. 121 (1805). Psittacodis gramineus, Wagl. Mon. Psitt. p. 516 (1832).

Eclectus gramineus, G. R. Gr. Gen. B. ii. p. 418, n. 6 (1846). Tanygnathus gramineus, Ep. Rev. et May. de Zoot. 1854, p. 153, n. ?; id. Naumannia, 1856, Consp. Psitt. n. ? 157; G. R. Gr. List Psitt. Brit. Mus. p. 68 (1859); id. P.Z. S. 1860, p. 358; id. Hand-list, ii. p. 158, n. 8251 (1870); Salvad. Ann. Mus. Civ.

Gen. viii. p. 369 (1876) (Bouru); id. Orn. Pap. e Mol. i. p. 133 (1880); Rehnw. Journ. f. Orn. 1881, p. 244 (Consp. Psitt. p. 132); id. Vogelbild. Nachtr. 61 (1883); Forbes, P. Z. S. 1883, p. 589; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 158 (1889).

Female. Green, underparts slightly more yellowish; pileum greyish green with a bluish tinge; upper part of the cheeks greyish green; lower part of the cheeks like the underparts; a black line from the forehead to the eyes; primaries and their coverts blue, edged with green; secondaries, median and greater upper wingcoverts green, narrowly edged with yellowish; under wing-coverts greenish yellow; tail above green, with the tip yellowish, underneath dull yellowish: "iris cream-colour; upper mandible pinkish grey; culmen sooty, tip corneous; lower mandible grey corneous; legs and feet lavender" (H. O. Forbes). Total length 16.5 inches, wing 5.5, tail 6.5, bill 1.32, tarsus 0.25.

Hab. Bourou.

I do not know of a male bird existing in any museum, but I think that the bird figured by D'Aubenton was probably a male, as the bluish tinge of the pileum is much brighter than in either of the two known specimens, both females. The bill of the supposed male is entirely pink in the plate.

a. Q sk. Kajeli, Bourou, 5th Dec. H. O. Forbes, Esq. [C.].

## 2. Tanygnathus luconensis.

Psittacus lucionensis, *Briss. Orn.* iv. p. 295, pl. xxii. f. 2 (1760); *Linn. S. N.* i. p. 146, n. 31 (1766); *Gm. S. N.* i. p. 339, n. 31 (1788); *Lath. Ind. Orn.* i. p. 120, n. 116 (1790).

Psittacus minor, sive Psittacula lucionensis, Gerini, Orn. ii. p. 21,

t. 130 (1769).

Perruche de l'Isle de Luçon, Sonn. Voy. Nouv. Guin. p. 80, pl. 44 (1776).

Perroquet de l'Isle de Luçon, D'Aubent. Pl. Enl. 287.

Psittaeus marginatus, P. L. S. Müll. S. N., Suppl. p. 77, n. 54 (1776); Gm. S. N. i. p. 324, n. 71 (1788); Lath. Ind. Orn. i. p. 96, n. 42 (1790); Shaw, Gen. Zool. viii. (2) p. 420 (1811); Bechst. Lath. Ueb. p. 73 (1812); Vieill. N. D. xxv. p. 350 (1817); Kuhl, Consp. Psitt. p. 37 (1820); Vieill. Enc. Méth. iii. p. 1389, pl. 223. f. 2 (1823); Voigt, Cuv. Uebers. p. 734 (1831); Cass. Pr. Acad. Nat. Sc. Philad. 1864, p. 240.

Le Perruche aux ailes chamarées, Buff. Hist. Nat. Ois. vi. p. 151

(1779); Levaill. Perr. pl. 60 (1801).

Varied-winged Parrot, Lath. Syn. i. p. 233 (1781); id. Gen. Hist. ii. p. 155 (1822).

Lace-winged Parrot, Lath. Syn. i. p. 244 (1781); id. Gen. Hist. ii. p. 157 (1822).

Manila green Parrot, Lath. Syn. i. p. 296 (1781); id. Gen. Hist. ii. p. 239 (1822).

Psittacus gala, Bodd. Tabl. Pl. Enl. p. 17 (1783).

Psittaeus pileatus, Scop. Del. Flor. et Faun. Insubr. p. 86, n. 21 (1786) (ex Sonnerat).

Psittacus olivaceus, Gm. S. N. i. p. 326, n. 76 (1788) (ex Buffon); Lath. Ind. Orn. i. p. 97, n. 43 (1790); Bechst. Kurze Ueb. p. 73 (1812); Vieill. Enc. Méth. iii. p. 1383 (1823).

Psittacus phrygius, Shaw, Gen. Zool. viii. 2 p. 421 (1811).

Arara marginata, Less. Tr. d'Orn. p. 187 (1831). Tanygnathus marginatus, Wagl. Mon. Psitt. p. 678 (1832); Bp. Consp. Av. i. p. 5 (1850); id. Rev. et Mag. de Zool. 1854, p. 153, n. 156; Sonancé, Rev. et May. de Zocl. 1856, p. 209; Bp. Naumannia, 1856, Consp. Psitt. n. 154; Sclat. P. Z. S. 1857, p. 225; G. R. Gr. P. Z. S. 1858, p. 195; id. Cat. B. New Guin. p. 60 (1859); Rosenb. Journ. f. Orn. 1864, p. 115; Sonsa, Mus. Nac. Lisb. Psittaci, p. 16 (1869); Salvad. Orn. Pap. e Mol. i. p. 135 (1880).

Tanygnathus gala, G. R. Gr. Gen. B. ii. p. 420, n. 2 (1846).

Tanygnathus macrorhynchos, part., Blyth, Cat. B. Mus. A. S. B. p. 3 (1849).

Tanygnathus pileatus, Cass. Un. St. Expl. Exp., Birds, p. 230 (1858)

(Sooloo Isl.).

(1859); Sclat. P.Z. S. 1860, p. 225 (note); G. R. Gr. P. Z. S. 1861, p. 436; Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xviii (1863); Wall. P.Z. S. 1864, pp. 285, 294; G. R. Gr. Hand-list, ii. p. 158, n. 8247 (1870); Sund. Meth. nat. Av. disp. Tent. p. 69 (1872); Tweedd. P. Z. S. 1877, pp. 536, 538 (Melanipa); Sharpe, P.Z. S. 1879, p. 133 (Sooloo Isl.); Tweedd. Voy. Chall., Birds. p. 9 (1881); Kutter. Journ. f. Orn. 1882, p. 176, 1883. Birds, p. 9 (1881); Kutter, Journ. f. Orn. 1882, p. 176, 1883, p. 294 (Sibulan, Sulu Isl.); Blas. Ornis, iv. pp. 305, 559 (1888) (Sanghir Isl.); Tristr. Cut. Coll. B. p. 76 (1889).

Eclectus lucionensis, Schieg. Mus. P.-B. Psittaci, p. 48 (1864); id.

op. cit. Revue, p. 26 (1874).

Eclectus mülleri, part., Schleg. Mus. P.-B. Psittaci, p. 48, n. 7

(1864).

Loriculus (Tanygnathus) luzoniensis, v. Mart. Journ. f. Orn. 1866, p. 22. Eclectus luconensis, Finsch, Papag. ii. p. 362 (1868); Gieb. Thes. Orn. ii. p. 75 (1875).

Tanygnathus muelleri, Wald. & Layard (nec Temm.), Ibis, 1872,

p. 95 (Negros).

Tanygnathus luconensis, Sclat. P. Z. S. 1871, p. 479; id. Ibis, 1872, p. 324; Wald. Trans. Zool. Soc. ix. pp. 133, 249 (1875); Wardl. Rams. Tweedd. Orn. Works, p. 655 (1881); Rehnw. Journ. f. Orn. 1881, p. 244 (Consp. Psitt. p. 132); Meyer, Sitzb. u. Abh. Ges. Isis, 1884, Abh. i. p. 6; Sharpe, Ibis, 1884, p. 316; Steere, List, p. 6

(1890).

Tanygnathus luzonensis, Brügg. Abh. Brem. v. p. 38 (1876) (Sanghir); Koch, Verz. Vogelb. aus Celebes und Sanghir, Febr. 1876, p. 1; Salvad. Orn. Mus. Civ. Gen. ix. p. 53 (1876); Tweedd. P. Z. S. 1877, pp. 755, 756 (Cebu), 817 (Butuan), 1878, p. 281 (S. Negros), p. 340 (Leyte), p. 642 (Palawan), p. 937 (Mindanao), (1879, p. 68 (Basilan); Tweedd. Orn. Works, pp. 301, 410, 460, 462, 529, 530, 544, 587, 595, 607, 628, 646 (1881); Relnw. Vogelbild. Nachtr. 62 (1883); Sclat. List Vert. An. 8th ed. p. 325 (1883); Sharpe, Ibis, 1888, p. 194; Whitch. Ibis, 1890, p. 41.

(1889); Smarpe, 1008, 1880; p. 104; f. mater. 1889, 1880; i. p. 312 Tanygnathus luzoniensis, Sharpe, Tr. Linn. Soc. (2) Zool. i. p. 312 (1876); Meyer, Ibis, 1879, p. 48; Guillem. P. Z. S. 1885, p. 252 (Sulu Isl.), p. 418 (Cagayan Sulu); Everett, Ibis, 1888, p. 282 (Mantanani Isl.); id. Journ. Str. Br. R. As. Soc. 1889, p. 176

Tanygnathus sumatranus, Trist. (nec Raffl.) Cat. Coll. B. p. 76

(1889).

Adult. Green, interscapular region and underparts yellowish green; forehead green; vertex, hind part of the head, and sometimes also the cheeks, blue; scapulars, and sometimes also the lower back, tinged with blue; quills dark green, the secondaries more or less tinged with blue; smaller upper wing-coverts near the bend of the wing black, the median ones dark blue, nearly black, with broad brownyellow edges; the greater upper wing-coverts blue, with yellowish-green edges; primary-coverts bluish green; tail green above, golden olive-yellow underneath: upper mandible red, lower orange; iris yellowish white; feet dusky greenish. Total length 12 to 14 inches, wing 7.5 to 7.9, tail 5, bill 1.30, tarsus 0.65.

Female. Like the male, only a little smaller.

Young. Darker green, no yellowish tinge on the interscapular region and lower parts; no blue colour on the head; the wing-coverts are green, edged with greenish yellow; the lower back is more or less tinged with blue; bill red.

Hab. Philippine Islands, including Palawan and Mantanani, and also the Sooloo Islands. It is not quite certain whether this species

lives also in the Sanghir Islands.

This species varies a good deal in size. Specimens from Manilla and from Sooloo Islands are the largest. A specimen from Sooloo Islands measures as follows:—Total length 14 inches, wing 8·3, tail 5·2, bill 1·45, tarsus 0·69.

a, b. Ad. sk.	Manilla.	Gould Coll.
c. Imm. sk.	Manilla.	Purchased.
$d$ , $e$ . $\beta \ Q$ ad. sk.	Luzon, Jan., April (A. B. Meyer).	Tweeddale Coll.
$f, g, \beta \neq ad. sk.$		Tweeddale Coll.
h. Imm. sk.	Negros.	Prof. Steere [C.].
<i>i, k.</i> ♂ ad. sk.	Valencia, Aug. (A. H. Everett).	
l. Ad. sk.	Guimaras, March (A. B. Meyer).	Tweeddale Coll.
m. d imm. sk.	Surigao, May (A.H. Everett).	Tweeddale Coll.
n, o. 3 ad. sk.	Butuan, May (A. H. Everett).	
p. ♀ imm. sk.	Zamboanga, May (A. H. Everett).	Tweeddale Coll.
q. ♂ ad. sk.	Malanypa.	'Challenger' Exped.
r. 3 ad. sk.	Basilan, May (A.H. Everett).	Tweeddale Coll.
s. d imm. sk.	Isabella, Basilan, Dec.	E. L. Moseley [C.].
t, u. ♂ ad. sk.	P. Princesa, Palawan, Jan., Dec. (A. H. Everett).	Tweeddale Coll.
v. Imm. sk.	Palawan.	Prof. Steere [C.].
$w, x. \not \subset \text{imm.}$	Mantanani, Dec.	A. H. Everett, Esq. [C.].
y. Ad. sk. z. Ad. st.	Sooloo Islands.	H. Veitch, Esq. [P.]. Purchased.

## 3. Tanygnathus megalorhynchus.

Psittacus fuscus, Briss. Orn. iv. p. 314 (1760). Perroquet de la Nouvelle Guinée, D'Aubent. Pl. Enl. 713. Grande Perruche de la Chine, Sonn. Voy. Ind. ii. p. 212 (1776). Perroquet à bec couleur de sang, Buff. Hist. Nat. Ois. vi. p. 122

(1779); Levaill. Perr. pl. 83 (1805).

Great-billed Parrot, Lath. Syn. i. p. 278, n. 86 (1781); id. Gen. Hist. ii. p. 157. Psittacus megalorhynchos, Bodd. Tabl. Pl. Enl. p. 45 (1783) (ex

D' Aubent.).

Grisled Parrot, Lath. Syn. Suppl. i. p. 64 (1787); id. Gen. Hist. ii.

p. 234 (1822).

Psittacus macrorhynchus, Gm. S. N. i. p. 338, n. 110 (1788) (ev. D'Aubent.): Lath. Ind. Orn. i. p. 117, n. 108 (1790); Shaw, Nat. Misc. pl. 921 (1809?); id. Gen. Zool. viii. 2, p. 530, pl. 79 (1811); Bechst. Kurze Uebers. p. 94 (1811); Kuhl, Consp. Psitt. p. 37 (1820); Vieill. Enc. Méth. p. 1364 (1823); Voigt, Cuv. Uebers. p. 734 (1831); Temm. Tabl. Méth. p. 60 (1839); S. Müll. Verh. Land- en Volkenk. pp. 107, 182 (1839-44).

Psittacus nasutus, Lath. Ind. Orn. i. p. 118, n. 109 (1790); Bechst. Kwze Uebers. p. 95 (1811); Vieill. N. D. xxv. p. 375 (1817).

Mascarinus macrorhynchus, Less. Tr. d'Orn. p. 189 (1831).
Tanygnathus macrorhynchus, Wagl. Mon. Psitt. p. 677 (1832); G. R. Gr. Gen. B. ii. p. 420, n. 1 (1846); Bp. Consp. i. p. 5 (1850); id. Rev. et Mag. de Zool. 1854, p. 153, n. 156; id. Naumannia. 1856, Consp. Psitt. n. 153; Souancé, Rev. et Mag. de Zool. 1856, p. 200; Sclat. P. Z. S. 1857, p. 225; G. R. Gr. P. Z. S. 1858, p. 195; id. Cat. B. New Guin. p. 60 (1859); id. P. Z. S. 1861, p. 436; Rosenb. Journ. f. Orn. 1862, pp. 62, 63, 64; Wall. P. Z. S. 1863, p. 20; Rosenb. Nat. Tijdschr. Ned. Ind. xxv. pp. 141 (partim), 142, 143, 144, 227 (1863); id. Journ. f. Orn. 1864, p. 115, n. 24; Bernst. Nat. Tijdschr. Ned. Ind. xxvii. pp. 295, 297 (1864); Gulliv. P. Z. S. 1875, p. 489.

Erythrostomus macrorhynchus, Sw. Class. B. ii. p. 300 (1837).

Tanygnathus megalorhynchus, G. R. Gr. List Psitt. Brit. Mus. p. 67 (1859); Selat. P. Z. S. 1860, pp. 226 (partim), 227; G. R. Gr. P. Z. S. 1860, p. 358; Finsch, Ned. Tijdschr. Dierk. i. Berigten, p. xvii (partim) (1863); Wall. P. Z. S. 1864, pp. 285, 294; Finsch, Neu-Guin. p. 157 (partim) (1865); Sousa, Mus. Nac. Lisb. Psittaci, p. 16 (1869); G. R. Gr. Hand-list, ii. p. 158, n. 8246 (1870); Meyer, Journ. f. Orn. 1873, p. 405; Salvad. Ann. Mus. Civ. Gen. vii. p. 755 (1875); Britgg. Abh. Brem. v. p. 37 (Sanghir) (1876); Salvad. Ann. Mus. Civ. Gen. ix. p. 52 (1876), x. p. 26, n. 119 (1877); id. P. Z. S. 1878, p. 78; Meyer, Rowl. Orn. Misc. iii. p. 127 (1878); id. Ibis, 1879, pp. 48 (Montahage Isl.), 145; Salvad. Orn. Pap. e Mol. i. p. 129 (1880); Rehnw. Vogelbild. t. xi. f. 6 (1878-83); id. Journ. f. Orn. 1881, p. 246 (Consp. Psitt. p. 134); Salvad. Voy. Chall., Birds, p. 59 (1881); Meyer, Verh. z.-b. Ges. Wien, 1881, p. 762 (N. Celebes); Blas. Journ. f. Orn. 1883, p. 126; Selat. List Vert. An. 8th cd. p. 325 (1883); Meyer, Sitzb. u. Abh. Ges. Isis, 1884, Abh. i. p. 6; Pleske, Bull. Ac. Pétersb. xxix. p. 523 (1884); Nehrk. Journ. f. Orn. 1885, p. 31; Guillem. P. Z. S. 1885, pp. 562 (Weeda Isl.), 619; Blas. Ornis, iv. p. 557 (1888); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 158 (1889); Tristr. Cat. Coll. B. p. 76 (1889); Hickson, Natural. in N. Celebes, p. 158 (Talaut Isl.) (1889).

Tanygnathus morotensis, Schleg. Dierent. p. 70 (1864).
Eelectus megalorhynchus, Schleg. Mus. P.-B. Psittaci, p. 46 (partim) (1864); id. Ned. Tijdschr. Dierk. iii. p. 184 (partim) (1866); Finsch, Papag. ii. p. 351 (1868); Schleg. Mus. P.-B. Psittaci, Revue, p. 23 (partim) (1874); Gieb. Thes. Orn. ii. p. 75 (1875);

Rosenb. Reist. nanr Geelvinkb. p. 6 (1875); Meyer, Sitzb. Isis zu Dresd. 1875, p. 77; Rosenb. Zool. Gart. 1878, p. 345.

Tanygnathus megalorhynchus, var. sumbensis, Meyer, Verh. z.-b. Ges. Wien, xxxi. p. 762 (Sumba) (1881)\*; Rchnw. u. Schal. Journ. f. Orn. 1883, p. 417.

Adult. Green, underneath yellowish green; sides yellow; feathers of the interscapular region green edged with light blue; lower back and uropygium light blue; scapulars black edged with blue; quills and greater upper wing-coverts blue edged with green; smaller and median upper wing coverts black, the last edged with bright yellow: under wing-coverts and axillaries yellow; tail above green, with yellow tip, underneath golden yellow, duller towards the base: "iris yellowish, with an outer ring white; bill coral-red; feet leadcolour" (D'Albertis). Total length 17 to 18 inches, wing 9.4 to 10, tail 5.9 to 6.3, bill 1.78 to 2, tarsus 0.85.

Female. Has the bill smaller than the male.

Young. Has the scapulars and the upper wing-coverts not so black

and more greenish, and the yellow edges of the same paler.

Hab. Western coast of Northern New Guinea, the Western Papuan Islands—Mysol, Salawatty, Batanta, Waigiou, and Guebch—the Northern Moluccas or the Halmahera group, and the Sanghir and Talaut Islands; according to Meyer also the Togian Islands.

a. ♂ ad. sk.	Batanta, June.	Purchased.
b. Ad. sk.	Salawatty (Bruijn).	Purchased.
c. Ad. sk.	Mysol (A. R. Wallace).	Tweeddale Coll.
d. Ad. sk.	Halmahera.	Purchased.
e. ♂ ad. sk.	Ternate (bought alive at).	'Challenger' Exped.
f. Ad. sk.	Kaisa Island.	Wallace Coll.
g. ♂ ad. sk.	Makian (A. R. Wallace).	Gould Coll.
h. Ad. sk.	Batchian.	Wallace Coll.
i. Ad. sk.	Batchian.	Purchased.
k. Ad. sk.	Sanghir Islands.	Tweeddale Coll.

## 4. Tanygnathus affinis.

Tanygnathus megalorhynchus (part.), Sclat. P. Z. S. 1860, p. 226 (specim. ex Ceram); Finsch, Neu-Guin. p. 157 (part.) (1863).

 Tanygnathus macrorhynchos, Rosenb. (nec Gin.) Journ. f. Orn. 1862,
 p. 61 (ex Bouru, Amboyna, and Ceram); id. Nat. Tijdschr. Ned.
 Ind. xxv. pp. 140, 141 (partim) (1863).
 Tanygnathus affinis, Wall. P. Z. S. 1863,
 p. 20, 1864,
 pp. 286, 294;
 Finsch, New-Guin.
 p. 157 (1865);
 G. R. Gr. Hand-list,
 ii. p. 158, n. 8250 (1870); Salvad. Ann. Mus. Civ. Gen. viii. p. 369 (1876), x. p. 26, n. 16 (1877); id. Orn. Pap. e Mol. i. p. 132 (1880); Rchnw. Journ. f. Orn. 1881, p. 245 (Consp. Psitt. p. 133); Blas. u. Nehrk. Verh. z.-b. Gesellsch. Wien, 1882, p. 114; Rchnw. Vogelbild. Nachtr. 63 (1883); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 158 (1889).

<sup>\*</sup> Having examined two typical specimens of the Sumba bird, kindly sent me for inspection by Dr. Meyer, I have not been able to find any difference from *T. megalorhynchus*, and I greatly doubt whether the asserted locality Sumba, given on the authority of Dr. Riedel, is correct.

Tanygnathus intermedius, Schleg. Dierent. p. 70 (1864).

Eclectus affiuis, Schleg. Mus. P.-B. Psittaci, p. 47 (1864); Finsch,
Papag. ii. p. 355 (1868); Schleg. Mus. P.-B. Psittaci, Revue, p. 25 (1874); Gieb. Thes. Orn. ii. p. 74 (1875); Lenz, Journ. f. Orn. 1877, p. 360.

? Psittacus macrorhynchus, Rosenb. (nec Gm.) Reis naar Zuidoostereil.

p. 100 (Goram) (1867).

Eclectus megalorhynchus, Rosenb. (nec Bodd.) Reis naar Zuidoostereil. p. 125 (1867).

Very much like *T. megalorhynchus*, from which it differs in having the sequlars green, not tinged with black, the small upper wing-coverts not black, but greenish blue, and the underparts more decidedly greenish, without any distinct yellowish tinge; the under wing-coverts are not pure yellow, but yellowish; iris olive-yellow, with an outer ring whitish; bill red; feet blackish. Total length 15 to 16 inches, wing 9.7, tail 5.3 to 5.5, bill 1.9 to 2, tarsus 0.85.

Hab. The Southern Moluccas—Bouru, Amboyna, Ceram, and

perhaps also Goram.

a. ♂ ad. sk.	Bouru.	Wallace Coll. (Type
b. Ad. sk.	Bouru.	of species.) Wallace Coll.
c. Ad. sk.	E. Ceram (A. R. Wallace).	Gould Coll.
d. Ad. st.	[New Guinea.]	Purchased.

#### 5. Tanygnathus subaffinis.

Tanygnathus subaffinis, Sclut. P. Z. S. 1883, pp. 51, 53, 194, 200;
Forbes, P. Z. S. 1884, p. 431, n. 9; id. Natural. Wander. p. 356 (1885);
Rehnw. u. Schal. Journ. f. Orn. 1885, p. 459;
Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 158 (1889).

Very much like *T. affinis*; the interscapular region and underparts yellowish green; feathers of the interscapular region slightly edged with blue; lower back and uropygium with the edges of the feathers light blue; upper tail-coverts yellowish green; scapulars green, tipped with blue; smaller upper wing-coverts near the bend of the wing blue; median upper wing-coverts green, with no black whatever, tipped with blue, and edged with bright yellow; primaries green "iris cream-yellow, with inner ring of pale gamboge; upper mandible bright scarlet, lower the same with the tip [light] corneous; legs and feet yellow" (*Forbes*). Total length 15 inches \*, wing 9.3 to 9.5, tail 5.8 to 6, bill 1.8 to 1.0, tarsus 0.75.

Hab. Tenimber Islands.

a. d ad. sk. Larat Is., Timor-laut, 10th Aug.
b. d ad. sk.
H. O. Forbes, Esq. [C.]. (Type of species.)
H. O. Forbes, Esq. [C.].

<sup>\*</sup> In Mr. Sclater's original description the total length is put down by mistake as 13 inches.

### Tanygnathus mülleri.

Psittacus sumatranus, Rafft. Trans. Linn. Soc. xiii. p. 281 (1822);

Vig. Memoir Raftles' Life, p. 667 (1830).
Psittacodis sumatranus, Wagl. Mon. Psitt. p. 576 (1832).
Psittacus mülleri, Temm. in Mus. Lugd.; Müll. & Schleg. Verh. Land- cn Volkenk. pp. 108, 182 (1839-44) (Boeton); Wiegm. Arch. f. Naturg. 1842, p. 79; G. R. Gr. Gen. B. ii. p. 421, n. 36 (1846).

Eclectus sumatranus, G. R. Gr. Gen. B. ii. p. 418, n. 5 (1845). Tanygnathus macrorhynchos (part.), Blyth, Cat. B. Mus. A. S. B.

p. 3, n. 13 (1849).

Tanygnathus sumatranus, Blyth, Cat. B. Mus. A. S. B. App. pp. iii, xviii (1849); id. Journ. A. S. B. xix. p. 235 (part.?) (1850); Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 157; Souancé, Rev. et Mag. de Zool. 1856, p. 210; Bp. Naumannia, 1856, Consp. Psitt. n. 146; Horsf. & Moore, Cat. B. Mus. E. I. Co. ii. p. 608 (1856-58); Souancé, Icon. Perr. pl. 46 (1857); G. R. Gr. Hand-list, ii. p. 158,

n. 8248 (1870); Brüggem. Abh. Brem. v. p. 38 (1876).

Tanygnathus mülleri, Bp. Consp. Av. i. p. 5 (1850); id. Compt. Rend. xxx. p. 136 (1850); id. Rev. et Mag. de Zool. 1854, p. 153, n. 155; KAX, P. 130 (1890); dt. Rev. et May. de Zool. 1854, p. 153, h. 135;
Souancé, Rev. et May. de Zool. 1856, p. 209; Bp. Naumannia,
1856, Consp. Psitt. n. 155; Souancé, Icon. Perr. pl. 45 (1857);
Sclat. P. Z. S. 1857, pp. 225, 226; G. R. Gr. List Psitt. Brit.
Mus. p. 68 (1859); Sclat. P. Z. S. 1860, p. 226; Rosenb. Journ. f.
Orn. 1862, p. 6; id. Nat. Trjdschr. Ned. Ind. xxv. p. 139 (1863);
Finsch, Ned. Trjdschr. Dierk. i. Berigt. p. xvii (1863);
Wall.
P. M. S. 1864, p. 284, 2014. Finsch Ned. Crip. p. 157 (1865). P. Z. S. 1864, pp. 286, 294; Finsch, Neu-Guin, p. 157 (1865); Sousa, Mus. Nac. Lisb. Psittaci, p. 16 (1869); G. R. Gr. Hundlist, ii. p. 158, n. 8249 (1870); Wald. Ibis, 1872, p. 116; id. Trans. Zool. Soc. viii. p. 31 (1872); Garrod, P. Z. S. 1873, p. 634, 1874, p. 587; Salvad. Ann. Mus. Civ. Gen. vii. p. 644 (1875), ix. p. 53 (Sanghir) (1876); Forbes, P. Z. S. 1877, p. 307; Lenz, Journ. f. Orn. 1877, p. 361; Meyer, Ibis, 1879, p. 47; Schmidt, P. Z. S. 1880, p. 310; Salvad. Orn. Pap. e Mol. i. p. 135 (1880); Tweedd. Orn. Works, p. 135 (1881); Rehnw. Vogelbild. t. xxvii. f. 9 (1878-83); id. Journ. f. Orn. 1881, p. 245 (Consp. Psitt. p. 133); Selat. List Vert. An. 8th ed. p. 325 (1883); Blas. Journ. f. Orn. 1883, p. 134; Meyer, Sitzb. u. Abh. Ges. Isis, 1884, Abh. i. p. 6; Guillem. P. Z. S. 1885, p. 542 (Talisse Isl., N. Celebes); Dallwitz, Journ. f. Orn. 1885, p. 103; Blas. Zeitschr. f. ges. Orn. 1885, p. 209, 1886, p. 206; id. Ornis, iv. p. 556 (1888); Tristr. Cat. Coll. B. p. 76 (1889); Hickson, Natural, in N. Celebes, pp. 59, 86, 155 (1889).

Tanygnathus albirostris, Wall. P. Z. S. 1862, p. 336 (Celebes and Sula Islands), 1864, pp. 286, 294; Finsch, Neu-Guin. p. 157 (1865); Sclat. P. Z. S. 1868, p. 262, 1871, p. 494; Garrod, P. Z. S. 1876, p. 692; Tweedd, P. Z. S. 1877, p. 818; Salvad. Orn. Pap. e Mol. i. p. 135 (1880); Tweedd, Orn. Works, p. 544 (1881); Rehnw. Journ. f. Orn. 1881, p. 246 (Consp. Psitt, p. 246) (syn. emend.); id. Vogelbild. text of pl. xxvi. f. 9 (1878-83); Selat. List Vert. An. 8th ed. p. 325 (1883); Dallwitz, Journ. f. Orn. 1885, p. 103; Guillem. P.Z. S. 1885, p. 543; Hickson, Natural. in N.

Celebes, p. 86 (1889).

Eclectus mülleri, Schleg. Mus. P.-B. Psittaci, p. 48 (1864); id. Ned. Tijdschr. Dierk. iii. p. 185 (1865); Finsch, Papag. ii. p. 357 (1868); Schley. Mus. P.-B. Psittaci, Revue, p. 25 (1874); Gieb. Thes. Orn. ii. p. 75 (1875); Lenz, Journ. f. Orn. 1877, p. 361; Rosenb. Malay. Archip. p. 275 (1878). Eclectus albirostris, Rosenb. Malay. Archip. p. 275 (1878).

Adult. Head green; neck, interscapular region, scapulars, and underparts yellowish green; lower back and uropygium blue; upper tail-coverts green, slightly edged with blue; wings green, smaller upper wing-coverts and primary wing-coverts edged with blue, median and greater upper wing-coverts edged with yellowish green; under wing-coverts yellowish green; tail above green with the tip yellowish, underneath golden olive-yellow: bill red; feet olive-green; iris white-yellow. Total length 13.5 inches, wing 8, tail 5, bill 1.25, tarsus 0.65.

Young. Interscapular region and scapulars green like the wings; no blue edges, or rarely any, to the small upper wing-coverts: "iris yellowish white; bill horny white with a flesh tinge, tip dusky; feet dull olive" (A. R. Wallace).

Hab. Celebes; and perhaps is the same bird which lives in the Sula Islands and also in the Sanghir Islands.

I think the question regarding the white-billed birds (Tanygnathus albirostris, Wall.) must be settled according to Dr. Meyer's views, and that they must be considered young birds. It is an undoubted fact that in the allied species also, T. everetti and T. burbidgei, red-billed birds occur, which have all the appearance of being fully adult, and also white-billed ones, which are certainly young; so that I have not the least doubt that the same observation holds good for T. mülleri, although some white-billed specimens living in confinement, as shown by Mr. Sclater (P. Z. S. 1871, p. 494), retain their white bill for a longer or shorter period. Dr. Finsch assures us that he has seen living examples in the Amsterdam Zoological Gardens with the white bill changing to a red colour. A specimen at present living in the aviary of the Zoological Society's Gardens in London, which was registered as T. albirostris on account of its white bill, has it now red.

The only bird from the Sula Islands in the British Museum has a white bill and the feathers of a dark green. Also a single specimen from Sanghir Islands, with a red bill, is remarkable for being much larger than those from Celebes, although apparently not fully adult, as the interscapular region is green with no yellow tinge; wing 8.8 inches, tail 5.5.

a, b, c. ♂ ad. et imm. sk.	Makassar, Celebes.	Wallace Coll.
$d. \subsetneq \text{imm. sk.}$	Makassar, Celebes.	Wallace Coll.
e. Ad. sk.	Menado, Celebes ( $A.R.$	(Type of <i>T. albirostris</i> , Wall.) Wallace). Gould Coll.
f, g, h. Ad. et imm. sk.	Celebes.	Tweeddale Coll.
i. ♀ imm. sk.	Sula Islands.	Wallace Coll.
k. İmm. sk.	Sanghir Island.	Tweeddale Coll.
l. Skeleton.	Celebes.	Zoological Society
m. Skeleton.	Celebes.	[P.]. Purchased.

### 7. Tanygnathus everetti. (Plate X.)

Tanygnathus sumatranus, G. R. Gr. (nec Raffl.) List Psitt. Brit. Mus. p. 68 (Samar Isl.) (1859); id. Hand-list, ii. p. 158, n. 8248 (1870).

Lorieulus (Tanygnathus) sumatranus, v. Mart. Journ. f. Orn. 1866,

p. 22 (partim).

Tanygnathus mülleri, part., Wald. Tr. Zool. Soc. viii. p. 31 (1872).
Tanygnathus everetti, Tweedd. Ann. & Mag. N. H. (4) xx. p. 533 (1877) (Butnan, N. Mindanao); id. P. Z. S. 1877, p. 818; Sharpe, P. Z. S. 1879, p. 314; Tweedd. Orn. Works, pp. 544, 561 (1881); Wardl. Rams. Tweedd. Orn. Works, pp. 655, 670 (1881); Rehmw. Journ. f. Orn. 1881, p. 246 (Consp. Psitt. p. 134); id. Vogelbild text of pl. xxvii. f. 9 (1878–83); Steere, List, p. 6 (1890).

Adult. Whole head grass-green; neck and underparts paler green, slightly yellowish; interscapular region dark green, with the edges of the feathers blue; lower back and uropygium deep turquoise-blue; upper tail-coverts green, more or less edged with blue; wings green; smaller upper wing-coverts near the bend of the wing edged with blue, all the others as well as the secondaries edged with yellowish green; primary wing-coverts green, washed with blue; under wing-coverts green, obsoletely edged with yellowish green; tail above green with paler tip, underneath golden olive-yellow: bill red; feet dark grey. Total length 13 inches, wing 7.7, tail 5, bill 1.3, tarsus 0.65.

Young. Has the bill reddish white; "iris orange" (Everett), Hab. Philippine Islands—Samar, Panay, and Mindanao.

Of the five specimens in the British Museum mentioned below, only the first two, from Samar and Panay, have the bill red; the other three have it whitish: the one from Samar and that from Panay have the lower back and the uropygium deep turquoise-blue, like the type specimen from Butuan, a white-billed bird; the last two specimens, which apparently have been kept in confinement, have the blue colour of the uropygium lighter.

α. Ad. st.
 b. β ad. sk.
 c. ♀ imm. sk.

Samar.
Conception, Panay, January.
Butuan, Mindanao, May (A.
H. Everett).

d. Ad. st. e. Ad. st.

[Sumatra.]

Purchased.
E. L. Moseley [C.].
Tweeddale Coll.
(Type of species.)
Zoological Society.
Massena Coll.

## 8. Tanygnathus burbidgei. (Plate XI.)

Tanygnathus burbidgei, Sharpe, P. Z. S. 1879, p. 313 (Sulu Islands); Ichnw. u. Schal. Journ. f. Orn. 1879, p. 427; Wardl. Rams. Tweedd. Orn. Works, p. 655 (1881); id. Ibis, 1884, p. 470; Guillem. P. Z. S. 1885, p. 252 (Sulu Islands).

Tanygnathus albirostris, part., Rehnw. Journ, f. Orn. 1881, p. 246; id. Consp. Psitt. p. 134 (1881).

ia. Consp. Psitt. p. 134 (1881).

Adult. Dark green; head and neck bright yellowish green; lower back and uropygium deep turquoise-blue; upper wing-coverts with very narrow yellowish-green edges; tail above dark green, under-

neath dull golden olive: "iris red; bill vermilion; tarsus dull olivebrown" (Guillemard). Total length 16 inches, wing 8.8, tail 6.2, bill 1.5, tarsus 0.75.

Young. A little smaller than the adult, the head somewhat darker

and the bill whitish.

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This is a very distinct species, resembling T. everetti, but much larger and with the head lighter than the body, and no blue edgings to the feathers of the interscapular region.

Hab. Sooloo Islands.

a. Ad. sk. Sooloo Islands (Burbidge). H. Veitch, Esq. [P.]. (Type of species.) H. Veitch, Esq. [P.]. b. Ad. et juv. sk. Sooloo Islands (Burbidge).

PALÆORNIS.

Type. Palæornis, Vig. Zool. Journ. ii. p. 46 (1825) . . . . . . . P. eupatria. Belocercus, Müll. & Schley. Verh. Nat. Gesch. Nederl. overz. Bezitt. (Land- en Volkenk.), p. 107 (1839-44) P. longicanda. Belurus, Bp. Rev. et Mag. de Zool. 1854, p. 152 . . . . P. longicauda.

Range. Africa north of the Equator from Senegambia to Abyssinia; Seychelles, Manritius, and Rodriguez Islands; India, Ceylon, Burmese Regions, Andaman and Nicobar Islands, Cochin China, Hainan, S. and S.W. China, Malay Peninsula and Sunda Islands, Sumatra, Borneo, and Java.

## Key to the Species.

a. Head green. a'. A large red patch on the wing-coverts. a''. A rose collar round the nape of the males, wanting in the females. a'''. Smaller: wing 7.8 to 8.2 inches; depth of the upper mandible at cere 0.73 to 0.78 inch . . . . . . . . . . . . eupatria, p. 435.  $b^{\prime\prime\prime}$ . Larger: depth of the upper mandible 0.85 to 0.96 inch. a4. Nape and sides of the head more or less tinged with glaucous grey; depth of the upper mandible 0.9 .. nepalensis, p. 437.  $b^4$ . Nape and sides of the head with no glaucous-grey tinge.  $a^5$ . Depth of the upper mandible at cere 0.85 inch ..... indoburmanica, p. 438. b<sup>5</sup>. Depth of the upper mandible at cere 0.93 to 0.96 inch ..... magnirostris, p. 440. b". Rose collar wanting both in male and female; green colour brighter and darker than in all the above species ..... wardi, p. 441. b'. No red patch on the wing-coverts; males with a rose collar, females without it. e". Larger: wing 7.3 inches; tail-feathers very broad; rose collar of the male interrupted behind; green colour rather dark. eques, p. 442.

2 F

d". Smaller: wing 5.8 to 6.8 inches; tail-	
feathers much narrower; green colour	
paler.	
e'''. Larger: wing 6.8 inches, bill 1 inch	torougtu n .113
d"". Smaller: wing 5.8 inches, bill 0.92 inch.	docilie p 417
/ Head not wholly away or with no error at all	docuts, p. 441.
b. Head not wholly green, or with no green at all.	
c'. Pileum not green, or if green no red colour	
confined to the cheeks.	
e". No frontal black band reaching the eyes.	
e'''. Upper back green.	
c <sup>4</sup> . Head red in the male, bluish in the	
female.	
c <sup>5</sup> . Under wing-coverts verditer-green;	
head bright red in the male; fe-	
male with no red spot on the wing-	
coverts	cyanocephala, p. 448.
d <sup>5</sup> . Under wing-coverts green; head	
rose-colour in the male; female	
as well as the male with a dark	
red spot on the wing-coverts	rosa, p. 453.
d <sup>4</sup> . Head slate-grey; female with no red	
spot on the wing-coverts.	
e <sup>5</sup> . Apical half of the two middle tail-	
feathers yellow	
f5. Apical half of the two middle tail-	
feathers lilac	
$f^{\prime\prime\prime}$ . Upper back more or less grey.	January pr. 1001
e <sup>4</sup> . An imperfect black collar round the	
nape of the male; general colour	
greenish blue-grey	exsul. p. 459.
f4. A very distinct collar round the	, ,
nape.	
g <sup>5</sup> . A black collar both in the male	
and female, and a second one	
bright blue-green in the male;	
wing-coverts bluish green with	*
pale edges	
$h^5$ . A broad collar on the nape green,	per teres outer, pr 2001
like the underparts; tail above	
dark blue	calthrone, p. 461.
f". A black frontal band reaching the eyes.	out of the first test
g'''. Breast vinous-red, nape green.	
g <sup>4</sup> . Under wing-coverts vinous: larger	
wing 8.75 inches	derbuana, p. 463.
h1. Under wing-coverts green: smaller	
wing 6.8 inches.	,
i. Upper mandible red and lower black	
in the male, or both mandibles black	
in the female	
k <sup>5</sup> . Both mandibles red	alexandri, p. 468.
$h^{\prime\prime\prime}$ . Breast green, nape like the head, pure	
grey in the male, tinged with bluish	
in the female	canicens, p. 470.
d'. Pileum green; cheeks reddish, more or less	3
bright.	
g". Primary-coverts green; forehead of the	)
male dark bluish green	
	, p

h". Primary-coverts blue.

i'''. Under wing-coverts green.

i<sup>4</sup>. Larger: wing 7·3 to 7·5 inches; nape and upper back of the male more yellowish and less suffused with lilac and glaucous tinge; female with the mandibular stripes black. nicobarica, p. 472.

 $k^4$ . Smaller: wing 6.7 to 7.2 inches; nape and upper back less yellowish and more strongly suffused with lilac and glaucous or bluish tinge; female with the mandibular stripes deep green ..... tytleri, p. 474.

k'''. Under wing-coverts yellow; sides of the head and a broad collar on the nape of the male pink-red; mandibular stripes black in the male, green in the female ...... longicauda, p. 475.

### Palæornis eupatria.

Psittaca Ginginiana, Briss. Orn. iv. p. 343, t. xxix. f. 1 (2) (1760) (e.v Ginginiano Regno in India Orientali).

The Ring Parrakeet, Edw. Glean. vi. p. 175, pl. 292 (upper figure)

Psittacus eupatria, Linn. S. N. i. p. 140, n. 7 (1766) (ex Brisson); Gm. S. N. i. p. 315, n. 7 (1788); Lath. Ind. Orn. i. p. 85, n. 11 (1790); Shaw, Gen. Zool. viii. 2, p. 438 (1811); Bechst. Kurze Ueb. p. 66 (1812); Vieill. N. D. xxv. p. 348 (1817); id. Enc.

*Méth.* iii. p. 1387 (1823).

Psittacus alexandri, Scop. (nec Linn.) Annus I. Hist. Nat. p. 29 (1769); Lath. Ind. Orn. i. p. 97, n. 46 (syn. emend. et excl. var.) (1790); Shaw, Gen. Zool. viii. 2, p. 423, pl. 61 (1811); Beclist. Kurze Ueb. p. 75 (1811); Kuhl, Consp. Psitt. p. 30 (1820); Vieill. Enc. Méth. iii. p. 1388 (partim) (1823); Voigt, Cur. Uebers. p. 727 (1831).

Perruche de Gingi, Daubent. Pl. Enl. 239 (young).

Perruche à collier des Isles Maldives, Daubent. Pt. Enl. 642

(\$\delta\$ ad.).
La Perruche à collier de l'Isle de Lucon, Sonn. Voy, à la Nouv.
Guin. p. 80, pl. 43 (1776); Wald. Tr Zool. Soc. ix. p. 138 (1875); Tweedd. Orn. Works, p. 305 (1881).

La Grande Perruche à collier d'un rouge vif, Buff. Hist. Nat. Ois

vi. p. 114 (1779).

La Grande Perruche à ailes rougeâtres, Buff. op. cit. p. 126 (1779). Gingi Parrot, Lath. Syn. i. p. 209 (1781); id. Gen. Hist. ii. p. 113, with var. A, p. 114 (1822).

Alexandrine Parrakeet, Lath. Syn. i. p. 234 (nd.) (1781); id. Gen.

*Hist.* ii. p. 159 (with var. A) (1822).

? Blue-collared Parrot, Lath. Syn. i. p. 234 (1781); id. Gen. Hist. ii. p. 161 (1822). ? Psittacus guianensis, Scop. Del. Flor. et Faun. Insubr. p. 86, n. 20

 $(ex\ Sonnerat)\ (1786).$ 

? Psittacus sonneti (sic), Gm. S. N. i. p. 324, n. 72 (1788) (ex Sonnerat).

? Psittacus sonnerati, Lath. Ind. Orn. i. p. 98, n. 47 (1790); Bechst.

Lath. Ueb. p. 76 (1812); Vieill. N. D. xxv. p. 325 (1817); id. Enc. Méth. iii. p. 1385 (1823).

La Grande Perruche à collier, Levaill. Perr. i. p. 88, pl. 30 (d ad.)

(1801) (Indes Or. et Ceylan).

La Perruche à épaulettes rouges, Levaill. Perr. ii. p. 8, pl. 73 (\$\overline{\pi}\$)

ad.) (1805).

Palæornis alexandri, Vig. (nec Linn.) Zool. Journ. ii. p. 49 (1825); Steph. Gen. Zool. xiv. 2, p. 126 (1826) (Ceylon); Wagl. Mon. Psitt, p. 506 (1832); Selb. Nat. Libr., Parrots, p. 72, pl. 2 (1836): \*\*Psitt. p. 506 (1832); Selb. Nat. Libr., Pairots, p. 12, pl. 2 (1836); 
\*\*Pstard. Madr. Journ. xi. p. 208 (1840); \*\*Hartl. Syst. Verz. 1836; 
\*\*Mus. p. 84 (1844); \*\*G. R. Gr. Gen. B. ii. p. 409, n. 1 (1846); 
\*\*Blyth, Cat. B. Mus. A. S. B. p. 4, n. 16 (partim) (1849); \*\*Bp. Consp. Av. i. p. 2 (partim) (1850); \*\*Kelaart, Prodr. Faun. Ceyl. p. 127 (1852); \*\*Layard, Ann. \$ Mag. N. H. (2) xiii. p. 262 (1854); \*\*Hartl. Journ. f. Orn. 1854, p. 158; \*\*Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 137; \*\*Souance, Rev. et Mag. de Zool. 1856. Consp. Psitt. p. 136 (partim); \*\* p. 157; Bp. Naumannia, 1856, Consp. Psitt. n. 136 (partim);
Horsf. & Moore, Cat. B. Mus. E. I. Comp. ii. p. 610 (1856-58);
G. R. Gr. List Psitt. Brit. Mus. p. 18 (partim) (1859); Jerd. B. G. R. Gr. List Fill. Dril. Mas. p. 18 (partim) (1869); Jerd. B. of Ind. i. p. 256 (partim) (1862); Blyth, Ibis, 1863, p. 1 (partim); Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. ix (partim) (1863); Schleg. Mus. P.-B. Psittaci, p. 16 (partim) (1864); Sousa, Mus. Nac. Lisb. Psittaci, p. 14 (1869); Holdsw. P. Z. S. 1872, p. 425 (Ceylon only); Hutt. Str. Feath. i. p. 333 (1873); ? Garrod, P. Z. S. 1873, p. 465, 1874, p. 587; Legge, Ibis, 1874, p. 14 (Ceylon); ? Schleg. Mus. P.-B. Psittaci, Revue, p. 35 (1874); ? Gulliv. P. Z. S. 1875, p. 489; Schmidt, P. Z. S. 1880, p. 309; Schlet. List Vert. An. 8th ed. p. 320 (partim 2) (1883) Sclat. List Vert. An. 8th ed. p. 320 (partim?) (1883).

Conurus alexandri, Less. Tr. d'Orn. p. 214 (1831). Palæornis cucullatus, Lear, Parr. pl. 32 (1832); G. R. Gr. Gen. B.

ii. p. 409, n. 2 (1846).

Palæornis eupatria, Licht. Nomencl. Av. p. 71 (1854); G. R. Gr. Hand-list, ii. p. 142, n. 8049 (partim) (1870); Hume, Str. Feath.

ii. p. 86, n. 147 (1879); Tristr. Cat. Coll. B. p. 75 (1889); Palæornis eupatrius, part., Finsch, Papag. ii. p. 11 (1868); Hume, Str. Feath. i. p. 433 (Ceylon) (1873), ii. pp. 9, 10 (1874); Wald. Ibis, 1874, pp. 278, 280, 282; Legge, Str. Feath. iii. p. 199 (1875); id. Ibis, 1875, p. 282; Gieb. Thes. Orn. iii. p. 8 (partim) (1877); Legge B. Canl. p. 163 (1880); Relum Maglillet et al. (1877); Legge, B. Ceyl. p. 168 (1880); Rchnw. Vogelbild. t. v. figs. 1, 2 (1878–83); id. Journ. f. Orn. 1881, p. 234 (Consp. Psitt. p. 122); Park. Ibis, 1886, p. 183; Oates, Nests & Eggs Ind. B. iii. p. 82 (partim) (1890).

Adult male. Above grass-green, brighter on the forehead and lores and darker on the wings; beneath dingy green, a little brighter on the abdomen and under tail-coverts; a faint blackish stripe from the nostrils to the eye; occiput and cheeks pervaded with a greyishblue tinge; broad black mandibular stripes passing down and across the sides of the neck, where they meet a rose collar which encircles the hind neck; on the secondary wing-coverts a dark red patch; greater under wing-coverts and quills underneath slategrey; central tail-feathers passing from the green base into blue and thence into yellowish at the tips; under surface of the tail yellowish: "legs pale yellow, with a bluish-grey inner circle; bill deep cherry-red, paler on the lower mandible, the tip somewhat yellowish; feet sap-green or plumbeous grey" (Legge). Total

length 18 to 19.5 inches, wing 7.8 to 8.2, tail 11 to 12, bill 1.3,

depth of upper mandible at cere 0.73 to 0.78, tarsus 0.75.

Adult female. Wants the black mandibular stripes and the rose collar. Total length 17 to 18 inches, wing 7.5 to 7.8, tail 9 to 10, greatest depth of upper mandible 0.7.

Young male. Similar to the female in plumage, but generally

larger.

k. Skeleton.

Hab. Ceylon.

Hume Coll. a. Ad. sk. Calapetya, Ceylon. Ragam Corale, Ceylon, July Hume Coll. b, c. ♂ ad. sk. (Hart Brothers). d. 3 imm. sk. Cevlon. Hume Coll. e, f. ad. et imm. sk. Cevlon, July. October. W. V. Legge, Esq. [P.]. g, h. Ad. sk. Tweeddale Coll. Ceylon. i. Ad. sk. [Saigon, Cochin China \*.] M. Pierre [C.].

### 2. Palæornis nepalensis.

Palæornis nipalensis, Hodys. As. Res. xix. p. 177 (1836): id. Gray's Zool. Misc. p. 85 (1844); Licht. Nomencl. Av. p. 71 (1854) (Nepal); Hume, Str. Feath. vii. p. 458 (1879), viii. p. 86, n. 147 ter (1879); Rehnw. Journ. f. Orn. 1881, p. 235 (Consp. Psitt. p. 123); id. Fegelbild. Nachtr. 56 (1883); Oates, B. Brit. Burm. ii. p. 140 (1883); Tristr. Cat. Coll. B. p. 75 (1889).

Palæornis alexandrinus, Blyth, Ann. & Mag. N. H. xii. p. 90

(1843).

Palæornis alexandri (part.), Jerd. Madr. Journ. xi. p. 208 (1840); Gray (nec Linn.). Cat. Hodgs. Coll. B. Mus. p. 112 (1846); Blyth, Cat. B. Mus. A. S. B. p. 4 (1849) (Nepal): Burgess, P. Z. S. 1854, (1856–58) (Nepal): Philipps, P. Z. S. 1857, p. 99; Adams, P. Z. S. 1858, p. 490, 1859, p. 173 (Cashmere); G. R. Gr. List Psitt. Brit. Mus. p. 18 (1859); Irby, Ibis, 1861, p. 213; Jerd. B. Ind. Brit. Mas. p. 16 (1862); Blyth, Ibis, 1863, p. 1 (part.); Gray, Cat. i. p. 256 (part.) (1862); Blyth, Ibis, 1863, p. 1 (part.); Gray, Cat. Hodgs, Coll. B. Mus. 2nd ed. p. 61 (1863); Schley. Mus. P.-B. Psittaci, p. 76 (part.) (1864); Beav. (nec Linn.) Ibis, 1865, p. 409 (Maunbhoom); Tytl. Ibis, 1868, p. 201; Brooks, Ibis, 1869, p. 47; Beav. Ibis, 1869, p. 410; Sousa, Mus. Nac. Lisb. Psittaci, p. 14 (1869).

Palæornis eupatrius (part.), Finsch, Papag. ii. p. 10 (1868); Gieb. Thes. Orn. iii. p. 8 (1877): Oates, Nests & Eggs Ind. B. iii. p. 82

(partim) (1890).

Palaeornis eupatria (part.), G. R. Gr. Hand-list, ii. p. 142, n. 8049 (1870); Swinh & Barn. (nec Linn.) Ibis, 1885, p. 62.

Palæornis sivalensis, Hutt. Str. Feath. i. p. 335 (1873): Hume, Str. Feath. ii. pp. 9, 10, 11 (1874), iii. p. 200 (note, iris white), vi. pp. 117, 118 (1878): Legge, B. Ceyl. p. 169 (1880).

Palæornis sacer, *Hutt. l. c.* p. 337 (1873).

<sup>\*</sup> This specimen lived in the Zoological Garden at Saigon, where most likely it had been brought from Ceylon.

Palæornis punjabi, Hutt. l. c. p. 338 (1873). Palæornis vindhiana, Hutt. l. c. p. 338 (1873).

Palæornis eupatrius vel sivalensis, *Ball, Str. Feath.* ii. p. 389 (Chota Nagpur) (1874).

Adult male. Very much like the male of *P. eupatria* but larger, and with the head, especially on the occiput and cheeks, tinged more or less with bluish grey. Total length 20 to 21 inches, wing 8.5 to 9, depth of the upper mandible at base 0.9.

Adult female. Differs from the male, wanting the black man-

dibular stripes and the rose collar.

Hab. North and Central India.

a. ♀ imm. sk.	Mt. Aboo (Dr. Newman).	Hume Coll.
b. Ad. sk.	Rohilcund (Capt. S. Pinwill).	Tweeddale Coll.
c. Ad. sk.	Kangra.	Hume Coll.
d. e. ♂ ad. sk.	Jhelum District, Nov. (A. O. H.).	Hume Coll.
f. ♂ ad. sk.	Deccan (Sykes).	India Museum [P.].
g. ♂ ad. sk.	Dehra Dhoon, Sept.	Hume Coll.
h-l. of ♀ ad. sk.	Dhoon below Mussoree.	Hume Coll.
m-s. ♂♀ad. sk.	Kaladoongee.	Hume Coll.
t. Ad. sk.	Kumaon.	India Museum [P.].
u. Q ad. sk.	Kumaon.	Hume Coll.
v-y. Ad. sk.		B. H. Hodgson, Esq.
<i>i</i> − <i>y</i> . Au. sk.	Nepal.	D. 11, 110dgson, Esq.
/ 4.7 1	NT 1 / T) 72 72 7	[P.].
z, a'. Ad. sk.	Nepal (B. H. Hodgson).	India Museum [P.].
$b', c', d'. \ \mathcal{F}$	Nepal, Dec. (J. Scully).	Hume Coll.
ad. sk.		
e'. Ad. sk.	Bootan.	India Museum [P.].
f'. ♂ ad. sk.	Maunbhoom, Feb. (R. C.	Tweeddale Coll.
	Beavan).	
g', $h'$ . Ad. sk.	Kamptee.	Dr. B. Hinde [P.].
i'. 3 ad. sk.	Mhow, Dec.	Colonel Swinhoe
** 0 ****	222011, 2500	[P.].
k', l'. Ad. sk.	Khandeish.	India Museum [P.].
m'. Ad. sk.		
	Khandeish.	Tweeddale Coll.
n'. $Q$ ad. sk.	Khandeish, March (J. David-	Hume Coll.
	son).	
o'. o' ad. sk.	Sambulpur, Jan.	Hume Coll.
<i>p'-w'</i> . ♂ ♀ ad. sk.	Raipur.	Hume Coll.
a'. Skeleton.		B. H. Hodgson, Esq.
		[P.].
y'. Skeleton.		Lu-
V		

#### 3. Palæornis indoburmanica.

Palæornis alexandri (part.), Blyth, Cat. B. Mus. A. S. B. p. 4 (1849) (Tenasserim); Horsf. & Moore, Cat. B. Mus. E.I. Comp. ii. p. 610 (1856-58) (Tenasserim); Gould, P. Z. S. 1859, p. 151 (Siam); Jerd. B. of Ind. i. p. 256 (1862) (North Burmah only); Blyth, Ibis, 1863, p. 1 (partim); Schleg. Mus. P.-B. Psittaci, pp. 76-80, n. 4 (Moulmein) (1864); Schomb. Ibis, 1864, p. 264 (Siam); Beav. Ibis, 1869, p. 411 (Burmah); Blyth (nec Linn.), B. Burm. p. 54 (1875).

Palæornis neglectus, Blyth\*, fide Schlegel, Mus. P.-B. Psittaci, p. 80, n. 4 (1864) (Moulmein).

Palæornis eupatrius (part.), Finsch, Papag. ii. p. 11 (1868); Wald. B. Burm. p. 55 (1875); Anders. Yunn. Exp. p. 567

(1879).Palæornis magnirostris, Hume (nec Ball), Str. Feath, iii. p. 55 (1875) (Pegu); Armstr. & Hume, Str. Feath. iv. p. 307 (1876) (Rangoon); Oates, Str. Feath. v. p. 143 (1877) (Pegu); Wardl. Rams. Ibis, 1877, p. 453 (Tonghoo and Rangoon); Hume & Davis. Str. Feath. vi. p. 117 (1878) (Tenasserim); Legge, B. of Ceyl. pp. 169, 170 (1880).

? Palæornis nipalensis, Hume (nec Hodgs.), Str. Feath. vi. pp. 117,

. 118 (1878).

Palaeornis indoburmanicus, *Hume*, *Str. Feath.* vii. p. 459 (1879) (Sikhim Terai and Burmah), vii. p. 86, n. 147 quat. (1879); *Bingham*, *Str. Feath.* ix. p. 159 (1880) (Tenasserim); *Rehnw. u. Schal, Journ. f. Orn.* 1880, p. 195; *Rehnw. Journ. f. Orn.* 1881, 2027; (1997) Pegu); id. B. Brit. Burm. ii. p. 139 (1883); Rehnw. Vogelbild. Nachtr. 56 (1883); Hume, Str. Feath. xi. p. 54 (1888); Tristr. Cat. Coll. B. p. 75 (1889); Marr. Avif. of Brit. Ind. ii. p. 465 (1890). Palæornis indoburmanica, Salvad. Ann. Mus. Civ. Gen. (2) iv. p. 573 (1887) (Bhamo), v. p. 539 (1888) (Tenasserim).

Adult male. Like the male of P. magnirostris, but the bill

generally not so deep and strong; depth of the upper mandible at cere 0.85. Adult female. Differs from the male, wanting the black man-

dibular stripes and the rose collar. Hab. Indo-Burmese Region, from Sikkim to Tenasserim, and

eastwards as far as Cambodia.

This is a species "far exceeding the Cinghalese P. eupatria in size, is wanting the glaucous grey-blue tinge on the nape and sides of head of true P. nipalensis, and is wanting the huge bill of P. magnirostris" (Hume); but still it eannot always be readily distinguished from P. nepalensis, especially as two forms have been merged by Hume in P. indoburmanica, one of which, the northern one from Sikkim and also from Bootan, has the mandibular stripes broader than in the Burmese form, and the yellow tinge at the base of the throat, also on the breast, is absent or nearly so, while in some specimens of the southern form from Burma it is almost as bright as in P. magnirostris.

Near Darjeeling. Hume Coll. a, b. ♂♀ ad. sk. c p. o ♀ ad. sk. Bhotan Doars, Jan., Feb., Nov., Hume Coll. and Dec. (L. Mandelli). 9. 3 ad. sk. Assam. India Museum [P.].

<sup>\*</sup> I have not been able to find Blyth's original reference, which is not in vol. xxviii, for 1859 of the 'Journal of the Asiatic Society of Bengal,' as quoted by Dr. Finsch. The only allusion to this name which I have been able to find is that by Schlegel; and if it could be shown that Blyth ever published the name with a description, it would have priority over Polaeornis indoburmanica, Hume.

$r$ . $\mathcal{J}$ ad. sk.	N. Khasia Hills, Dec. (A. W. Chennell).	Tweeddale Coll.
s-y. ♂♀ ad. sk.	Cachar, January (J. Inglis).	Hume Coll
$z, a', b', \beta \subsetneq ad.$	Thatone, December $(W, \mathbb{R}^n)$	Time Con.
sk. c'. ♂ ad. sk.	Davison). Wimpong, December (W. Davison).	Hume Coll.
d'. ♀ ad. sk.	Moulmein, April (W. Davison).	Hume Coll.
$e'-k''$ . $\mathcal{J}$ ad. sk.	Amherst, Jan., Dec. (W. Davison).	Hume Coll.
$l', m'$ . $\mathcal{F} \circ \mathbb{Q}$ ad.	Pahbyouk, Attaran Dist., March (W. Davison).	Hume Coll.
$n'$ . $\beta \circ 2$ ad. sk.	Yeaboo, Attaran River, March (W. Davison).	Hume Coll.
o'. ♂ ad. sk.	Weppitan, Dec. (J. Darling).	Hume Coll.
p'. ♂ ad. sk.	Thayetmyo.	Hume Coll.
q'. 3 ad. sk.	Tonghoo, Oct. (E. W. Oates).	Hume Coll.
$r'-\alpha''$ . $\mathcal{J} \subseteq \mathrm{ad}$ .	Tonghoo, Jan., Dec. (R. G.	Tweeddale Coll.
sk.	W. R.).	
	77 . 20.71	
b", c". ♂♀ ad.	Pegu.	Tweeddale Coll.
sk.		
sk. $d''$ . $\delta$ ad. sk. $e''-h''$ . $\delta \circ \varphi$ ad.	Pegu, March (E. W. Oates). Lower Pegu, Feb., March, &	Hume Coll. E. W. Oates, Esq.
sk. d''. ♂ ad. sk. e''-h''. ♂ ♀ ad. sk.	Pegu, March (E. W. Oates). Lower Pegu, Feb., March, & Sept.	Hume Coll. E. W. Oates, Esq. [P.].
sk. $d''$ . $\delta$ ad. sk. $e''-h''$ . $\delta \circ \varphi$ ad.	Pegu, March (E. W. Oates). Lower Pegu, Feb., March, & Sept. Rangoon, Oct. & Dec. (R. G.	Hume Coll. E. W. Oates, Esq.
sk. d''. ♂ ad. sk. e''-h''. ♂ ♀ ad. sk.	Pegu, March (E. W. Oates). Lower Pegu, Feb., March, & Sept. Rangoon, Oct. & Dec. (R. G. W. R.). Elephant Point, Jan. & Dec.	Hume Coll. E. W. Oates, Esq. [P.].
sk. d''. ♂ ad. sk. e''-h''. ♂ ♀ ad. sk. i'', j''. ♂ ♀ ad. sk.	Pegu, March (E. W. Oates). Lower Pegu, Feb., March, & Sept. Rangoon, Oct. & Dec. (R. G. W. R.). Elephant Point, Jan. & Dec. (J. Armstrong). Khykehto, February (W. Davi-	Hume Coll. E. W. Oates, Esq. [P.]. Tweeddale Coll.
sk. $d''$ . $\sigma$ ad. sk. $e''-h''$ . $\sigma \circ \circ \circ$ ad. sk. $i'',j''$ . $\sigma \circ \circ \circ \circ$ sk. $k''-p''$ . $\sigma \circ \circ \circ \circ \circ \circ$ sk.	Pegu, March (E. W. Oates). Lower Pegu, Feb., March, & Sept. Rangoon, Oct. & Dec. (R. G. W. R.). Elephant Point, Jan. & Dec. (J. Armstrong). Khykehto, February (W. Davison). Theinzeik, January (W. Davison).	Hume Coll. E. W. Oates, Esq. [P.]. Tweeddale Coll. Hume Coll.
sk. $d''$ . $\sigma$ ad. sk. $e''-h''$ . $\sigma \circ \circ \circ$ ad. sk. $i'',j''$ . $\sigma \circ \circ \circ \circ$ ad. sk. $k''-p''$ . $\sigma \circ \circ \circ \circ \circ$ ad. sk.	Pegu, March (E. W. Oates). Lower Pegu, Feb., March, & Sept. Rangoon, Oct. & Dec. (R. G. W. R.). Elephant Point, Jan. & Dec. (J. Armstrong). Khykehto, February (W. Davison). Teinzeik, January (W. Davison). Salween River, January (W.	Hume Coll. E. W. Oates, Esq. [P.]. Tweeddale Coll. Hume Coll.
sk. d''. ♂ ad. sk. e''-h''. ♂ ♀ ad. sk. i'',j'''. ♂ ♀ ad. sk. k''-p'''. ♂ ♀ ad. sk.  q''. Ad. sk. r''. ♂ ad. sk.	Pegu, March (E. W. Oates). Lower Pegu, Feb., March, & Sept. Rangoon, Oct. & Dec. (R. G. W. R.). Elephant Point, Jan. & Dec. (J. Armstrong). Khykehto, February (W. Davison). Theinzeik, January (W. Davison). Salween River, January (W. Darison). Bhamo, Upper Burmah, Jan.	Hume Coll. E. W. Oates, Esq. [P.]. Tweeddale Coll. Hume Coll. Hume Coll. Hume Coll.
sk. d''. ♂ ad. sk. e''-h''. ♂ ♀ ad. sk. i'',j''. ♂ ♀ ad. sk. k''-p''. ♂ ♀ ad. sk. q''. Ad. sk. r''. ♂ ad. sk.	Pegu, March (E. W. Oates). Lower Pegu, Feb., March, & Sept. Rangoon, Oct. & Dec. (R. G. W. R.). Elephant Point, Jan. & Dec. (J. Armstrong). Khykehto, February (W. Davison). Theinzeik, January (W. Davison). Salween River, January (W. Davison).	Hume Coll. E. W. Oates, Esq. [P.]. Tweeddale Coll. Hume Coll. Hume Coll. Hume Coll.

## 4. Palæornis magnirostris.

Palæornis alexandri, Blyth (nec auct.), J. A. S. B. xxviii. p. 413 (1859) (Andamans); Ibis, 1860, p. 187; Blyth, Ibis, 1863, p. 1 (Andaman Islands only), p. 369, 1866, p. 353; Beav. (nec Linn) Ibis, 1867, p. 319 (Andaman Isl.); Ball, Str. Feath. i. p. 60 (1872) (Andamans).

Paleornis magnirostris, Ball, J. A. S. B. xli. p. 278 (1872) (Andamans); Hume, Str. Feath. ii. pp. 9, 10, 176 (partim) (1874) (Andamans only); Gieb. Thes. Orn. iii. p. 820 (1877); Hume, Str. Feath. viii. p. 86, n. 147 bis (1879); Legge, B. of Ceyl. pp. 169, 170 (1880); Rehuw. Journ. f. Orn. 1881, p. 235 (Consp. Psitt. p. 123); id. Vogelbild. Nachtr. 56 (1883); Oates, B. Brit. Burm. ii. p. 149 (1883) (Andaman Isl.).

<sup>\*</sup> The bird from Cambodia has a good deal of grey on the hind part of the head.

Palæornis eupatrius, Finsch (nec Linn.), Papag. ii. p. 945 (1868); Wald. (nec Linn.) Ibis, 1873, p. 297 (S. Andaman); Tweedd. Orn. Works, p. 235 (1881).

Adult male. Very much like the male of P. eupatria, but has the bill larger and stronger; the red patch on the wing-coverts generally brighter; below the nape and above the rose collar there is a narrow blue collar more or less conspicuous: "iris bright yellow; cere yellow; bill bright red, the tip yellow; eyelids pale pink, the edges orange; legs orange-yellow" (Oates). Total length 22 to 21 inches, depth of the upper mandible at cere 0.93 to 0.96.

Adult female. Differs from the male, wanting the black man-

dibular stripes and the red collar. Size rather smaller.

Hab, Andaman Islands.

a-d.  $\mathcal{J} \supseteq ad$ . sk. Mount Harriet, Andamans, Hume Coll. March & Dec. (W. Darison). e. 3 imm. sk. Aberdeen, S. Andamans, Hume Coll. September (W. Davison). Port Blair, S. Andamans. Hume Coll. f. Ad. sk. Port Mouat, S. Andamans, Jan. & April (W. Davison). g-k.  $\mathcal{J} \supseteq \mathrm{ad.} \, \mathrm{sk.}$ Hume Coll.  $l, m, u. \beta \subsetneq ad.$ S. Andamans, June & Septem-Hume Coll. sk. ber (W. Davison). o, p, q. & Qad. S. Andamans, Jan. & Feb. Tweeddale Coll. (R. G. Wardlaw Ramsay). sk. S. Andamans, March, April, & Nov. (R. J. Wimberley). r-u.  $\beta \ \ 2 \ ad. \ sk$ . Tweeddale Coll. v. ♀ ad. sk. Port Blair, S. Andamans, Feb. Tweeddale Coll. (R. J. Wimberley).Cocos Island, April (R. G. w. Imm. sk. Sharpe Coll. Wardlaw Ramsay). Gt. Cocos, March (W. Davix, y.  $\mathcal{E}$  ad. et Hume Coll. ♀ imm, sk. son).

#### 5. Palæornis wardi.

Palæornis wardi, E. Newt. P. Z. S. 1867, p. 346; id. Ibis, 1867, pp. 341, 359; Finsch, Papag. ii. p. 945 (1868); Schleg. et Poll. Rech. Faum. Madag. p. 157 (1868); G. R. Gr. Hand-list. ii. p. 143, n. 8059 (1870); Newt. Ibis, 1872, p. 34; A. § E. Newt. Ibis, 1876, pp. 282, 288, pl. vi. (3 & \$\Phi\$); Gieb. Thes. Orn. iii. p. 11 (1877); Hartl. Vöy. Madag. p. 224 (1877); Oust. Bull. Soc. Philom. Paris, 1878, p. 165; Rehnw. Journ. f. Orn. 1881, p. 235 (Consp. Psitt. p. 123); id. Vogelbild. Nachtr. 57 (1883); Tristr. Cat. Coll. B. p. 75 (1889).

Adult male. Grass-green; occiput and nape tinged with bluish; an obscure black line from the nostrils to the eyes, a broad black mandibular stripe passing down and across the side of the neck; on the secondary wing-coverts a dull red patch; two central tail-feathers light blue, edged with yellowish green, especially at the tip; lateral tail-feathers green, those next to the central ones

slightly tinged with blue on the outer web; the inner web of the lateral tail-feathers yellowish green; tail underneath yellowish; underparts yellowish green: bill red; feet dusky grey. length 16 inches, wing 7.75, tail 9, bill 1.4, tarsus 0.75.

Female. Wants the black mandibular stripes.

Hab. Seychelles.

This species differs from P. eupatrius and allies in wanting the rose collar.

a. [2] ad. sk. b, c. Ad. sk.

Mahé, Seychelles, March. Seychelles, May (H. M. Warry).

Canon Tristram [P.]. Shelley Coll.

### 6. Palæornis eques.

Psittaea borbonica torquata, Briss. Orn. iv. p. 328, pl. xxvii. f. 1 (1760) (Bourbon).

Psittacus alexandri, var. γ, Linn. S. N. p. 142 (1766).

Perruche à collier de l'Isle de Bourbon, Daubent, Pl. Enl. 215.

Perruche à double collier, Buff. Hist. Nat. Ois. vi. p. 143 (1779); Levaill, Perr. pl. 39 (1801).

Alexandrine Parrakeet, var. C, Double-ringed Parrakeet, Lath. Syn. i. p. 326 (1781); Shaw, Gen. Zool. viii. 2, p. 525 (1811).

Psittacus eques, Bodd. Tabl. Pl. Enl. p. 13 (1783). Psittacus alexandri, var. δ, Gm. S. N. i. p. 321 (1788); Lath. Ind. Orn. i. p. 98 (1790); Vieill. N. D. xxv. p. 345 (1817).

Psittacus semirostris, Herm. Obs. Zool. p. 125 (1804).

Psittacus bitorquatus, Kuhl, Consp. Psitt. p. 92 (1820).
Rose-ringed Parrakeet, var. B, Lath. Gen. Hist. ii. p. 161 (1822).
Psittacus bicollaris, Vicill. Enc. Méth. iii. p. 1385 (1823).
Palæornis bitorquatus, Vig. Zool. Journ. ii. p. 51 (1825); Steph. Gen. Zool. xiv. p. 127 (1826): Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 139; Souancé, Rev. et Mag. de Zool. 1856, p. 158; Bp. Naumaunia, 1856, Consp.: Psitt. n. 138; id. Compt. Rend. xliv. p. 538.

Palæornis cubicularis, part., Wagl. Mon. Psitt. p. 507 (1832). Palæornis torquatus (part.), G. R. Gr. Gen. B. ii. p. 409, n. 3 (1846); ? Schleg. et Poll. Rech. Faun. Madag. p. 157 (Mauritius)

Palæornis borbonicus, Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 140;

id. Naumannia, 1856, Consp. Psitt. n. 140.
Paleornis eques, G. R. Gr. List Psitt. Brit. Mus. p. 20 (1859); E. Newt. Ibis, 1861, p. 115; Finsch, Papag. ii. p. 35 (1868); G. R. Gr. Hand-list, ii. p. 142, n. 8052 (1870); Newt. Ibis, 1872, p. 34; Hume, Str. Feath. ii. p. 15 (1874): A. & E. Newt. Ibis, 1876, pp. 283, 284, 289: Gieb. Thes. Orn. iii. p. 8 (1877); Hartl. Vög. Madag. p. 222 (1877); Oust. Bull. Soc. Philom. Paris, 1878, p. 166; Rehnw. Journ. f. Orn. 1881, p. 238 (Consp. Psitt. p. 126): id. Vogelbild. Nachtr. 59 (1883).

Palæornis echo, A. Newt. Ibis, 1876, p. 284 (Mauritius).

Adult male. Green, the occiput tinged with bluish; a narrow black stripe from the nostrils to the eye; broad black mandibular stripes passing down and across the sides of the neck, where they meet a rose collar, not quite complete behind; under wing-coverts

vellowish green; central tail-feathers scarcely tinged with bluish; tail underneath yellowish: upper mandible red, under mandible reddish black; iris yellow; naked skin round the eyes orange; feet dark grey. Total length 14.3 inches, wing 7.3, tail 7.2, bill

0.95, tarsus 0.6.

Female. Differs from the male in having no bluish tinge on the occiput, no rose collar, and no black mandibular stripes, there being only a trace of the latter of a dark-green colour; as in the male, there is a black narrow stripe from the nostrils to the eyes: the central tail-feathers are tinged with blue, more conspicuously than in the male, at least in the specimen examined; bill entirely dusky black. Dimensions as in the male, but the bill a little smaller (0.92 inch).

Hab. Mauritius.

This species is very similar to P. torquata, from which it differs in being larger, of a darker green colour, and in having the tailfeathers broader.

a. 3 ad. st. Mauritius. b. ♀ ad. sk. Mauritius.  $e, d, \beta \neq ad. sk.$ Mauritius (Bewsher).

Purchased. Purchased. Shelley Coll.

### 7. Palæornis torquata.

? The long-tailed Green Parrot, Edw. Glean. iv. pl. 175 (1751) (West Indies); Lath. Gen. Syn. i. p. 230 (without var. A) (1781); id. Gen. Hist. ii. p. 153 (1822).

Psittaca, Briss. Orn. iv. p. 319 (1760). Psittaca torquata, Briss. Orn. iv. p. 323, n. 55 (1760).

Psittacus alexandri (part.), *Lim. S. N.* i. p. 141 (1766).

? Psittacus rufirostris, *Lim. S. N.* i. p. 143, n. 18 (♀) (1766).

(America); *Gm. S. N.* i. p. 323, n. 18 (1788); *Lath. Ind. Orn.* i. p. 95, n. 39 (without var.  $\beta$ ) (1790); Bechst. Lath. Uebers. p. 73 (1811); Kuhl, Consp. Psitt. p. 26 (1820); Vieill. Enc. Méth. iii. p. 1401 (1823); Voigt, Cuv. Ueb. p. 729 (1831).
? Psittacus krameri, Scop. Annus I. Hist. Nat. p. 31 (1769).

La Perruche, D'Aubent. Pl. Enl. 550 ( $\mathfrak{P}$ ).

La Perruche à collier, D'Aubent. Pl. Enl. 551 ( 3).

La Perruche à collier couleur de rose, Buff. Hist. Nat. Ois. vi. p. 152 (1779).

Le Sincialo, Buff. Hist. Nat. Ois. vi. p. 265.

Alexandrine Parrakeet, var. A, Rose-ringed Parrakeet, Lath. Syn. i.

p. 235 (1781).

Psittacus torquatus, Bodd. Tabl. Pl. Enl. p. 32 (1783): Kuhl, Consp. Psitt. p. 30 (1820): Voigt, Cuv. Veb. p. 727 (1831); Sundev. Physiogr. Sällsk, Tidskr. 1837, p. 173; Thienem. Fortpfl. d. ges. Vög. p. 73 (1846).

Psittacus alexandri, var.  $\beta$ , Gm. S. N. i. p. 321 (1788); Lath. Ind.

Orn. i. p. 98 (1790).

Psittacus manillensis, Bechst. Stubenvög. p. 612 (1794); id. Lath. Ueb. p. 75, n. 50 (1811); Hahn, Orn. Atl., Papag. p. 17, t. 6 (д) (1834).

Alexandrine Parrakeet, Luth. Syn. Suppl. ii. p. 86 (1802).

La Perruche à collier rose, Levaill. Perr. pl. 22 (3), pl. 23 (young) (1801).

La Perruche Sincialo, Levaill. Perr. p. 42 (♀) (1801).

La Perruche souffré, Levaill. Perr. pl. 43 (var.) (1801).

Sulphur Parrakeet, Shaw, Gen. Zool. viii. 2, p. 428 (1811); Lear, Parr. pl. 33 (1832).

Psittacus sincialo, Shaw, Gen. Zool. viii. 2, p. 441 (1811).

Rose-ringed Parrakeet, Lath. Gen. Hist. ii. p. 160 (1822). Palæornis torquatus, Vig. Zool. Journ. ii. p. 50 (part.) (1825); Steph. Gen. Zool. xiv. 2, p. 127 (1826); Frankl. P. Z. S. 1831, p. 120; Sykes, P. Z. S. 1832, p. 96 (Dukhun); McClell. P. Z. S. 1839, p. 165; Irwin, J. A. S. B. viii. p. 1007 (1839) (Oxus); Jerd. Madr. Journ. xi. p. 207 (1840); Blyth, Ann. & Mag. N. H. xii. p. 90 (1840); Ewer, P. Z. S. 1842, p. 92; Strickl. P. Z. S. 1842. p. 167; Hodgs, Gray's Misc. p. 85 (1844); Gray, Cat. Hodgs, Coll. B. Mus. p. 113 (1846); G. R. Gr. Gen. B. ii. p. 409, n. 3 (partim) (1846); Blyth, Cat. B. Mus. A. S. B. p. 4 (1849); id. J. A. S. E. xix. p. 231 (1850); Kelaart, Prodr. Faun. Ceyl. p. 127 (1852); Layard, Ann. & Mag. N. H. (2) xiii. p. 262 (1854); Burg. P. Z. S. 1854, p. 256; Theobald, J. A. S. B. xxiii. p. 596 (1854); Hartl. Journ. f. Orn. 1854, p. 158; Bp. Rev. et May. de Zool. 1854, p. 152, n. 138; Chesney, Journ. of the Euphr. Exped. i. pp. 443 537 (Syria!); Souance, Rev. et May. de Zool. 1856, p. 157; Bp. Naumannia, 1856, Consp. Psitt. n. 143; Horsf. & Moore, Cat. B. Mus. E.I. Comp. ii. p. 611 (1856-58); Philipps, P. Z. S. 1857, p. 99; Adams, P. Z. S. 1858, p. 490, 1859, p. 173 (Cashmere); Moore, P. Z. S. 1859, p. 453; G. R. Gr. List Psitt. Brit. Mus. p. 19 (1859); Irby, Ibis, 1861, p. 218; Jerd. B. of Ind. i. p. 257 (1802); Blyth, Ibis, 1863, p. 2: Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. ix (1863); Schleg. Mus. P.-B. Psittaci, p. 80 (partim) (1864); Park. P. Z. S. 1865, p. 238; Beav. ibid. p. 691; id. Ibis, (1864), Tan. T. Z. S. 1863, p. 230; Beat. total. p. 631, tal. 163, p. 409, 1867, p. 320; Layard, B. of S. Afr. p. 320 (note) (1867); Finsch, Papag. ii. p. 17 (partim) (1868); Hume, Ibis, 1869, p. 4; Sousa, Mus. Nac. Lisb. Psittaci, p. 14 (1869); Blyth, Ibis, 1870, p. 162; G. R. Gr. Hand-list, ii. p. 142, n. 8051 (1870); Anders. P. Z. S. 1871, p. 679, 1872, p. 80; Holdsw. P. Z. S. 1872 Anders. P. Z. S. 1871, p. 679, 1872, p. 80; Holdsw. P. Z. S. 1872, p. 425; Elwes, P. Z. S. 1873, p. 661; Hume, Str. Feath. i. p. 170 (Sindh) (1873); id. Nests & Eggs, p. 116 (1873); Lloyd, Ibis, 1873, p. 407; Hume, Str. Feath. ii. p. 13 (1874); Ball, ibid. p. 389 (Chota Nagpur); Legge, Ibis, 1874, p. 14; Wald. Ibis, 1874, p. 282; Schley. Mus. P.-B. Psittaci, Revue, p. 35 (part.) (1874); Gulliv. P. Z. S. 1875, p. 489; Blyth, B. of Burm. p. 55 (1875); Legge, Ibis, 1875, p. 282; Hume, Str. Feath. iii. p. 56 (Pegu) (1875); Butl. Str. Feath. iii. p. 457 (Mount Aboo and N. Guzerat) (1875); Gieb. Thes. Orn. iii. p. 11 (part.) (1877); Wardl. Rams. Ibis, 1877, p. 453 (Karen Hills); Oates, Str. Feath. v. p. 144 (1877); Hume & Davis. Str. Feath. vi. p. 118 (1878); Hume, Str. Feath, viii, pp. 51, 86, n. 148 (1879); Scully, Str. Feath, viii, p. 240 (Nepal) (1879); Schmidt, P. Z. S. 1880, p. 309; Legge, B. of ('eyl. p. 171 (1880); Rehnw. Voyelbild. t. v. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 235 (Consp. Psitt. p. 124); Salv. Cat. B. Strickl. Coll. p. 457 (part.) (1882); Oates, Str. Feath. x. p. 189 (Pegu) (1882); id. B. Brit. Burn. ii. p. 141 (1883); Sclat. List Vert. An. 8th ed. p. 321 (1883); Swinh. & Barn. Ibis, 1885, p. 62; Park. Ibis, 1886, p. 183; Sundev. Ibis, 1886, p. 454; Hume, Str. Feath. xi. p. 54 (1888); Tristr. Cat. Coll. B. p. 75 (1889); Murr. Avif. of Brit. Ind. ii. p. 467 (1890); Oates, Nests & Eggs Ind. B. iii. p. 85 (1890).

Conurus rufirostris, Less. Tr. d'Orn. p. 213 (1831); Le Maout, Hist. Nat. Ois. p. 97 (1853).

Conurus torquatus, Less. Tr. d'Orn. p. 215 (1831).

Palæornis cubicularis, Wayl. Mon. Psitt. p. 507 (1832) (syn. emend.). Psittacus torquatus luteo varians, Bourj. Perr. pl. 2 (1837–38).

Paleornis bitorquatus, Blyth (nec Kuhl), Cat. B. Mus. A. S. B. p. 4

(1849).

Palæornis layardi, Blyth, Cat. B. Mus. A. S. B. p. 341 (1849) (Ceylon): Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 142; G. R. Gr. List Psitt. Brit. Mus. p. 20 (1859); Sousa, Mus. Nac. Lisb. Psittaci, p. 15 (1869); G. R. Gr. Hand-list, ii. p. 143, n. 8060 (1870).

Paleornis frenatus (part.), Licht. Nomencl. Av. p. 71 (1854).

Palæornis torquata, Beav. Ibis, 1869, p. 410; Layard, Ibis, 1869, p. 456 (var.); Garrod, P. Z. S. 1873, p. 634, 1874, p. 587; Parker, Ibis, 1883, p. 193.

Adult male. Green; the hind part of the head with a bluish tinge; a black line from the nostrils to the eye; a rose collar encircling the neck, except in front; broad mandibular stripes passing down and across the sides of the neck, where they meet the rose collar; underparts green, tinged with greyish on the breast; under wing-coverts yellowish green; central tail-feathers bluish, the others yellow on the inner web and greenish on the outer one, all tipped with yellow: "bill red, brownish at tip; cere grey; legs ashy; iris pale yellow; edges of the eyelids pale orange" (Oates). Total length 16 to 17 inches, wing 6.8, tail 9.5 to 10, bill 1, tarsus 0.65.

Female. Wants the black loral line, and also the black and rose collars and the black mandibular stripes; an indistinct collar of emerald-green round the neck. Size a little smaller than the male.

Hab. The whole peninsula of India, Ceylon, and the Indo-Burmese countries, as far as Cochin China (Dr. Tiraud).

a. Imm. sk.	Kashmir (Bellew).	India Museum [P.].
b. ∂ ad. sk.	Lawrencepur, Punjab, March (R. G. W. R.).	Tweeddale Coll.
c. & ad. sk.	Hyderabad, Sind.	India Museum [P.].
d. Ad. sk.	Shikarpore (Dr. Griffiths).	India Museum [P.].
$e, f. \ \  \   \circlearrowleft \ \  \   $ ad. sk.	Banks of Indus, near Sukkur, Dec. (A. O. H.).	Hume Coll.
y. 3 ad. sk.	Jhelum, Nov. (A. O. H.).	Hume Coll.
$h-n$ . $\mathcal{J} \supseteq \text{ad. sk.}$	Sambhur, July, Aug. Sept., Nov. (R. M. Adam).	Hume Coll.
o. Ad. sk.	Moultan.	Gould Coll.
$p$ -s. $\beta \circ \text{ad. et}$ imm. sk.	Gurgaon, Jan. (W. N. Chill).	Hume Coll.
t. 3 ad. sk.	Kangra Valley, May.	Hume Coll.
u. Ad. sk.	Dehra Dhoon.	Gould Coll.
v. Ad. sk.	Kumaon (Capt. Strachey).	India Museum [P.].
w. 3 ad. sk.	Kumaon.	Hume Coll.
v, y. 3 ad. sk.	Etawah, October.	Hume Coll.
z, a'. Ad. sk.	Kamptee.	Dr. B. Hinde [P.].

$b'$ . $\mathcal{J}$ ad. sk.	Umballah, Sept. (A. C. Main-	Tweeddale Coll.
$c'$ . $\mathcal{J}$ ad. sk. $d'$ , $e'$ . Ad. sk. $f'$ - $k'$ . Ad. sk. $l'$ . Ad. st. (var.).	yay). Umballah, Nov. (R. C. Beavan). N.W. Provinces. Himalayas (Griffiths). N. India.	Tweeddale Coll. Tweeddale Coll. India Museum [P.]. J. R. Reeves, Esq.
<i>m′−₁</i> •′. Åd. sk.	Nepal.	[P.]. B. H. Hodgson, Esq.
$s', t', u'$ . Ad. sk. $v', w'$ . $d \circ Q$ ad. sk.	Nepal ( <i>Hodgson</i> ). Nepal, Dec. ( <i>J. Scully</i> ).	[P.]. India Museum [P.]. Hume Coll.
$x', y', z'$ . $\beta \ $ 2 ad. sk.	Darjeeling Terai, Feb. & March (L. Mandelli).	Hume Coll.
a". Ad. sk.	Buxa Doars, January (L. Man-delli).	Hume Coll.
b''-f''. ♂♀ ad.	Bhotan Doars, April (L. Man-delli).	Hume Coll.
$g'', h'', i''$ . Ad. sk. $k''-n''$ . $\exists \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	Assam (McClelland). Suddya, Assam, April, June (J. Cockburn).	India Museum [P.]. Hume Coll.
sk. o'', p''. ♂♀ ad.	N. Khasia Hills, March (A. W.	Tweeddale Coll.
$q''-y''$ . $\mathcal{J} \ $ ad.	Chennell). Dibrughur, April to December (J. R. Cripps).	Hume Coll.
z". ♀ ad. sk. a³, b³, c³. ♂♀ ad. sk.	Cachar (J. Inglis). Dacca.	Hume Coll. Hume Coll.
$d^3$ , $e^3$ . $Q$ ad. sk. $f^3$ . $\mathcal{J}$ ad. sk.	Calcutta, December. Mhow, December.	Hume Coll. Colonel Swinhoe [P.].
$g^3$ , $h^3$ . $or Q$ ad.	Seoni.	Hume Coll.
$i^3, k^3, l^3$ . Ad. sk. $m^3$ . $\mathcal{J}$ ad. sk. $n^2, o^3, p^3$ . Ad. sk. $q^3-w^3$ . $\mathcal{J}$ Q ad.	Deccan (Sylves), Khandeish, Nov. (J. Davidson), Khandeish, Ahmednugger, Aug., Sept., Oct.	India Museum [P.]. Hume Coll. Tweeddale Coll. Tweeddale Coll.
$x^3$ . $\mathcal{J}$ ad. sk.	(S. B. Fairbank).  Maunbhoom, December (R. C. Beavan).	Tweeddale Coll.
$y^3$ . $\mathcal{J}$ ad. sk.	Muddur, Mysore, August.	W. Davison, Esq. [P.].
$a^3$ , $a^4$ . Ad. sk. $b^4$ . Q ad. sk. $c^4 - f^4$ . $O$ Q ad. sk.	Malabar. Travancore, November. Anjango, Travancore, Dec.	Tweeddale Coll. Bourdillon [C.]. Hume Coll.
$g^1, h^4$ . $d \circ ad$ .	Ragam Corale, Ceylon, December (Hart Brothers.).	Hume Coll.
$i^4 - p^4$ . $d \circ ad$ .	Ceylon, April, July, Nov. (S. Chapman).	Tweeddale Coll.
$q^4, r^4, s^4$ . $\circlearrowleft \  \  $ ad.	Upper Burmah, Jan. & Sept.	J. Anderson, Esq.
$u^1$ . $\sigma$ ad. sk. $u^1$ . $\sigma$ ad. sk. $v^1$ , $v^1$ . $\sigma$ 2 ad.	Thayetmyo, Sept. (R.G. W. R.). Thayetmyo. Lower Pegu, Jan. & Oct.	Tweeddale Coll. Hume Coll. E. W. Oates, Esq.
$x^4$ , Ad. sk.	Pinang.	[C.]. India Museum [P.].

y4. Ad. sk. z1. Ad. sk.

[Luzon.]. Port Elizabeth \*.

a<sup>5</sup>. Ad. st. (yellow var.).

b. dad. sk. (var. with a black head).  $c^5$ ,  $d^5$ ,  $e^5$ . Skeletons.  $f^{5}, g^{5}$ . Bones of the trunk.

M. Athlin, Esq. [P.]. J. C. Rickard, Esq. [P.]. Zoological Society's

Coll.

Zoological Society's Coll.

#### 8. Palæornis docilis.

Psittacus cubicularis, Hasselq. Reise nach Palästina, p. 292 (1762) (Æthiopia).

Psittacus docilis, Vieill. N. D. xxv. p. 343 (1817) (Senegal); id. Enc. Méth. iii. p. 1384 (1823).

Psittacus frenatus, Illig. Mus. Berol.; Lieht. Verz. Doubl. p. 6 (1823)

Palæornis inornatus, Viy. Zool. Journ. v. p. 274 (1830) (♀, Africa). Palæornis torquatus, Denh. & Clapp. (nec Linn.) Narr. Trav., App. p. 197 (1826) (Coast of Senegal, Central Africa); Rüpp. Neue Wirbelth. pp. 62, 63 (1833); Sw. B. of West Afr. ii. p. 174, fig. on the frontispiece (1837); Allen & Thoms. Narr. Exped. Niger, i. p. 311 (1848); Strickl. P. Z. S. 1850, p. 219 (Kordofan); Heugl. Uebers. p. 46 (1855); Hartl. Journ. f. Orn. 1854, p. 195; Brehm. Journ. f. Orn. 1855, pp. 485, 486, 1857, pp. 84, 88, 381, 383; Hartl. Orn. West-Afr. p. 166 (1857); Brehm, Journ. f. Orn. 1858, pp. 404, 408; Hartl. Journ. f. Orn. 1861, p. 262; Brehm, Journ. f. Orn. 1862, pp. 37, 294, 305; Brehm, Habesch, p. 362 (1863); Schleg. Mus. P.-B. Psittaci, p. 80 (partim) (1864); Hartm. Journ. f. Orn. 1864, pp. 144, 227; Finsch, Papag. ii. p. 17 (partim) (1868); Finsch, Trans. Zool. Soc. vii. p. 280 (1869) (Anseba); Blyth, Ibis. 1870, p. 162; Finsch u. Hartl. Vog. O.-Afr. p. 871 (1870); Blanf. Geol. S. Zool. of Abyss. p. 305 (1870); Heugl. Orn. N.O.-Afr. ii. 2, p. clvii (1871); Schley. Mus. P.-B. Psittaci, Revue, p. 35 (partim) (1874); Gieb. Thes. Orn. iii. p. 11 (partim) (1877); Pelz. Ferh. z.-b. Ges. Wien, 1881, pp. 153, 615 (Central Africa).

Palæornis cubicularis, Rüpp. Syst. Úeb. p. 95 (1845) (Kordofan, Senaar, Abyssinia); Hartl. Syst. Verz. Ges. Mus. p. 84 (1844): Ferret et Galin. Voy. Abyss. iii. p. 188, n. 27 (1847); Heugl. Journ. f. Orn. 1862, pp. 37, 294, 305; Brehm, Illustr. Thierl. i. p. 67 (1865); Antin. e Salvad. Ann. Mus. Civ. Gen. iv. p. 404

(1873).

Psittacus torquatus, Lefevre, Abyss., Ois. p. 128 (1845-1850).

Palæornis parvirostris, Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 141 (descr. nulla); Souancé, Rev. et Mag. de Zool. 1856, p. 157 (Abyssinia); Bp. Naumannia, 1856, Consp. Psitt. n. 139 (Abyssinia); G. R. Gr. List Psitt. Brit. Mus. p. 19 (1859); Sousa, Mus. Nac. Lisb. Psittaci, p. 14 (Mozambique!) (1869); G. R. Gr. Hand-list, ii, p. 142, n. 8058 (1870).

<sup>\*</sup> The bird from Port Elizabeth agrees with the Indian specimens, and we learn from Layard (B. of S. Afr. p. 230, note) that Palæornis torquata has been introduced into South Cape Colony and breeds there.

Paleornis docilis, Bp. Compt. Rend. xliv. p. 538 (1857); G. R. Gr. List Psitt. Brit. Mus. p. 19 (1859); Bocage, Av. Poss. Port. i. p. 15 (1867); Heugl. Peterm. Geogr. Mitth. 1869, pp. 413, 415; Sousa, Mus. Nac. Lisb. Psittaci, p. 14 (1869); G. R. Gr. Handlist, ii. p. 142, n. 8050 (1870); Sharpe, Cat. Afr. B. p. 19 (1871); Bocage, Jouan. f. Orn. 1876, p. 435; Rchnw. Journ. f. Orn. 1881, p. 236 (Consp. Psitt. p. 124); id. Vogelbild. Nachtr. 59 (1883); Sclat. List Vert. An. 8th ed. p. 321 (1883); Hartert, Journ. f. Orn. 1886, pp. 574, 598 (Niger-Benué); Tristr. Cat. Coll. B. p. 75 (1889).

Psittacus cubicularis, Heugl. Journ. f. Orn. 1863, pp. 162, 163; Antin. Journ. f. Orn. 1866, p. 172.

Psittaeus cubicularus, Antin. Čat. p. 1 (1864).

Paleornis torquata, Hengl. Orn. N.O.-Afr. i. 2, p. 738 (1871);
 Hartl. Abh. Brem. viii, p. 212 (1882); Sharpe, Journ. Linn. Soc.,
 Zool. xvii. p. 429 (1884) (Central Africa).

Very much like *P. torquata*, but has shorter wings and smaller bill. Wing 5·8 inches, bill 0·92.

Hab. Tropical Africa, north of the Equator, from Abyssinia to

Senegambia.

The West-African birds have the bill a little larger than the Eastern ones, which have been distinguished as *P. parvirostris*, Bp.

a. ∂ ad. sk.	Anseba Valley, July.	W. T. Blanford, Esq.
b, c. Ad. sk.	Anseba River (Esler).	[C.]. Sharpe Coll.
d. Ad. sk.	Anseba River (Esler).	Shelley Coll.
$e, f, g, d \supseteq ad.$	Bejook, July (W. Jesse).	Tweeddale Coll.
sk. h. Ad. sk.	View View Country	E Dohndong Fra [C]
	Niam-Niam Country.	F. Bohndorff, Esq. [C.].
<i>i</i> , <i>k</i> . Ad. st.	Senegal.	J. Pulham, Esq. [P.].
l. Ad. sk.	Senegal.	J. Pulham, Esq. [P.].
m, n. Ad. sk.	Senegal (L. Laglaize).	Tweeddale Coll.
o. Ad. sk.	R. Gambia.	Sharpe Coll.
p. Ad. sk.	R. Gambia,	Purchased.
q, r, s. Ad. sk.	Gambia (Capt. Moloney).	Shelley Coll.
t. Ad. sk.	Fantee (Aubinn).	Sharpe Coll.
u. Skeleton.	,	-

# 9. Palæornis cyanocephala.

Psittaca ginginiana erythrocephalos, *Briss. Orn.* iv. p. 346, t. xxix. f. 2 (1760).

Psittaca cyanocephalos, Briss. Orn. iv. p. 359, t. xix. f. 2 ( $\mathfrak{P}$ ) (1760).

Psittacus cyanocephalus, Linn. S. N. i. p. 141, n. 10 (1766) (ex Brisson); Gm. S. N. i. p. 316, n. 10 (1788); Lath. Ind. Orn. i. p. 86, n. 14 (1790); Bechst. Lath. Uebers. p. 67 (1811); Vieill. Enc. Méth. iii. p. 1392 (1823).

Perruche à tête bleue des Îndes Orientales, D'Aubent. Pl. Enl. 192

Perruche à tête rouge de Gingi, D'Aubent. Pl. Enl. 264 (3).

Psittacus purpureus, Müll. S. N. Suppl. p. 74, 6 d (1776); Cass. Pr. Acad. Nat. Sc. Philad. 1864, p. 239; Wald. in Blyth's B. of Burm. p. 56 (1875).

? La Perruche à tête rouge de l'Isle de Luçon, Sonner. Voy. à la Nouv. Guin. p. 79, pl. 42 (1776).

La Perruche à tête rouge, Buff. Hist. Nat. Ois. vi. p. 144 (3) (1779).

La Perruche à tête bleue, Buff. op. cit. vi. p. 145 ( $\mathfrak{P}$ ) (1779).

Blue-headed Parrot, Lath. Syn. i. p. 211, n. 13 (1781) ( $\bigcirc$ ); Shaw, Gen. Zool. viii. 2, p. 427 (1811); Lath. Gen. Hist. ii. p. 119, with var. A (1822).

Blossom-headed Parrakeet, Lath. Syn. i. p. 239, n. 39 (1781) (3);

id. Gen. Hist. ii. p. 164 (1822). Psittaeus signatus, Scop. Del. Flor. et Faun. Insubr. p. 86, n. 19

(1786) (ex Sonnerat).

(1780) (e. 30 mer at).

Psittacus erythrocephalus, Gm. S. N. i. p. 325, n. 74 (1788);

Bechst. Lath. Uebers. p. 76 (1811); Voigt, Cuv. Uebers. p. 728 (1831); Hahn, Orn. Atl., Papag. p. 57, t. 41 (3 ad.) (1836).

Psittacus ginginianus, Lath. Ind. Orn. i. p. 99, n. 50 (1790) (without var.); Vieill. Enc. Méth. iii. p. 1393 (1823).

Psittacus rhodocephalus, Shaw, Mus. Lever. tab. 45 (1792); id. Nat. Misc. pl. 877 (1809?); id. Gen. Zool. viii. 2, p. 434, pl. 52 (1811). ? La Perruche à tête bleue dans son jeune âge, Levaill. Perr. pl. 26 (1801) (ex ave domefacta?) \*.

La Perruche fridytutah, Levaill. Perr. ii. p. 10, pl. 74 (d ad.)

(1805).

La Perruche à collier jaune, Levaill. Perr. pls. 75, 76 ( $\mathfrak{Q}$ ) (1805). Psittacus flavitorquis, Shaw, Gen. Zool. viii. 2, p. 439 (1811) (ex Levaillant).

Psittacus annulatus, Bechst. Kurze Uebers. p. 77, pl. 7 (1811); Kuhl, Consp. Psitt. p. 31 (1820); Voigt, Cuv. Uebers. p. 728 (1831). Psittacus flavicollis, Vieili. N. D. xxv. p. 345 (1817) (ex Levail-

lant); id. Enc. Méth. iii. p. 1385 (1823).

Psittacus bengalensis, Kuhl (nec Gm.), Consp. Psitt. p. 32 (1820); Bourj. Perr. pl. 1 (3 ad.) (1837–38). Yellow-collared Parrakeet, Lath. Gen. Hist. ii. p. 166 (1822).

Palæornis flavitorquis, Vig. Zool. Journ. ii. p. 51 (1825); Steph. Gen. Zool. xiv. 2, p. 127 (1826).

Palæornis erythrocephalus, Vig. Zool. Journ. ii. p. 53 (1825) (syn. emend.); Steph. Gen. Zool. xiv. 2, p. 127 (1826); ? Licht. Nomencl. Av. p. 71 (1854) (E. India).

Palæornis flavicollaris, Vig. Philos. Mag. & Ann. of Philos. 1830, p. 455; Frankl. P. Z. S. 1831, p. 120 (Q); Ewer, P. Z. S. 1842,

p. 92.

Conurus erythrocephalus, Less. Tr. d'Orn. p. 215 (1831); Le

Maout, Hist. Nat. Ois. p. 97 (1853). Palæornis bengalensis, Frankl. P. Z. S. 1831, p. 120; Wagl. Mon. Psitt. p. 515 (part., 1832); Jerd. Madr. Journ. xi. p. 208 (1840); ? Strickl. P. Z. S. 1842, p. 167; Blyth, Ann. & May. N. H. xii. p. 90 (1843); Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); G. R. Gr. Gen. B. ii. p. 409, n. 5 (partim) (1846); id. Cat. Hodgs. Coll. B. Mus. p. 113 (partim) (1846); Burg. P. Z. S. 1854, p. 256; Gr. Cat. Hodgs. Coll. B. Mus. 2nd ed. p. 61 (1856); id. List Psitt. Brit. Mus. p. 20 (1859); Wald. Ibis, 1874, p. 285; Tweedd. Orn. Works, p. 278 (1881).

Palæornis cyanocephalus, Wayl. Mon. Psitt. p. 517 (1832); Strickl. Ann. & Mag. N. H. xiii. p. 33 (1844); Blyth, Cat. B. Mus.

<sup>\*</sup> It looks to me made up with the body of a Palæornis and the head of a Trichoglossus novæ hollandiæ.

A. S. B. p. 5, n. 21 (1849); id. J. A. S. B. xix. p. 232 (1850); Kelaart, Prodr. Faun. Ceyl. p. 127 (1852); Layard, Ann. & Mag. N. H. (2) xiii. p. 264 (1854); Hartl. Journ. f. Orn. 1854, p. 158, B. p. 1xiii; Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 45; Souancé, Rev. et Mag. de Zool. 1856, p. 158; Bp. Naumannia, 1856, Consp. Psitt. n. 142; Horsf. & Moore, Cat. B. Mus. E. I. Comp. ii. p. 616 (part.) (1856–58); Bp. Compt. Rend. xliv. p. 538 (1857); Philipps, P. Z. S. 1857, p. 99; Adams, P. Z. S. 1858, p. 490, 1859, p. 173; Hartl. Journ. f. Orn. 1859, p. 289; Irby, Ibis, 1861, p. 218; Finsch, Papag. ii. p. 40 (1868) (syn. emend.); Sousa, Mus. Nac. Lisboa, Psittaci, p. 15 (1869); Gieb. Thes. Orn. iii. p. 8 (partim) (1877); Selat. P. Z. S. 1879, p. 300; Legge, B. of Ceyl. p. 174 (1880); Rchnw. Vogelbild. t. v. ff. 5, 6 (1878–83); id. Journ. f. Orn. 1881, p. 237 (Consp. Psitt. p. 125); Park. Ibis, 1886, p. 183; Hume, Str. Feath. xi. p. 55 (1888).

? Palæornis erythrogenis (sic), Bourj. Perr. in the text of pl. 1 (1837-38).

Palæornis rhodocephalus, Hodys., Gray's Zool. Miscell. p. 85 (1844). Palæornis rosa, G. R. Gr. (nee Bodd.) Cat. Hodys. Coll. Brit. Mus. 2nd ed. p. 21 (1856); id. List Psitt. Brit. Mus. p. 21 (1859); Jerd. B. of Ind. i. p. 259 (partim) (1862); Blyth, Ibis, 1863, p. 4 (partim); Schley. Mus. P.-B. Psittaci, p. 81 (1864); Beav. Ibis, 1865, p. 409; Pelz. Ibis, 1868, p. 319; id. Journ. f. Orn. 1868, p. 35; Sousa, Mus. Nac. Lisboa, Psittaci, p. 15 (1869); Blyth, Ibis, 1870, p. 162 (part.); Anders. P. Z. S. 1871, p. 679; Jerd. Ibis, 1872, p. 6; Holdsw. P. Z. S. 1872, p. 425 (Ceylon); Lloyd, Ibis, 1873, pp. 399, 401, 407; Legge, Ibis, 1874, p. 14; Holdsw. Ibis, 1874, p. 125; Wald. Ibis, 1874, p. 285; Gould, B. of Asia, vi. ipl. 2 (pt. xxvi., 1874); Schley. Mus. P.-B. Psittaci, Revue, p. 35 (1874); Legge, Ibis, 1875, p. 282; Blyth, B. of Burmah, p. 56 (1875); Tweedd. Orn. Works, p. 278 (1881); Salv. Cat. B. Strickl. Coll. p. 457 (1882); Murr. Avif. of Brit. Ind. ii. p. 468 (1890).

Palæornis purpureus, G. R. Gr. Hand-list, ii. p. 142, n. 8054 (1870); Hume, Nests and Eggs, p. 116 (1873); id. Str. Feath. i. p. 433 (1873), ii. pp. 9, 15 (1874); Ball, Str. Feath. ii. p. 390 (1874); Brooks, Str. Feath. iii. p. 232 (1875); Butler, Str. Feath. iii. p. 457 (1875); Hume, Str. Feath. v. p. 21 (1877); Cripps, Str. Feath. vii. p. 261 (Eastern Bengal) (1878); Hume, ibid. (note); id. Str. Feath. viii. p. 86, n. 149 (1879); Swinh. & Barn. Ibis, 1885, p. 62; Tristr. Cat. Coll. B. p. 75 (1889); Oates, Nests &

Eggs Ind. B. p. 87 (1890).

Palæornis cyanocephala, Rchnw. Journ. f. Orn. 1879, p. 211. Palæornis purpurascens, Marsh. Ibis, 1884, p. 410 (Chamba).

# Variety with a yellow spot on the wing.

Blue-headed Parrakeet, Edw. Glean. ii. p. 175, pl. 292 (lower figure) (1760).

Psittaca cyanocephalos Indica, Briss. Orn. vi. App. p. 129 (1760).

Psittacus alexandri, var. δ, Liun. S. N. i. p. 142 (1766). Perruche à tête d'azur, Buff. Hist. Nat. Ois. vi. p. 148 (1779).

Alexandrine Parrakeet, var. D, Azure-headed Parrakeet, Lath. Syn. i. p. 237 (1781).

Psittacus alexandri, var.  $\epsilon$ , Gm. S. N. i. p. 321 (1788).

Psittacus indicus, *Lath. Ind. Orn.* i. p. 86, n. 15 (1790); *Bechst. Kurze Uebers.* p. 75 (1812).

Perruche à épaulettes jannes, Levaill. Perr. pl. 61 (1801) (Ternate!). Psittacus xanthosomus, Bechst. Lath. Uebers. p. 74, pl. 5 (ex Levaillant) (1812); Kuhl, Consp. Psitt. p. 34 (1820).
Psittacus ternatensis, Vieill. N. D. xxv. p. 346 (1817) (ex Levail-

lant); id. Enc. Méth. iii. p. 1386 (1823).

Azure-headed Parrot, Lath. Gen. Hist. ii. p. 120 (1822).

Palæornis xanthosomus, Vig. Zool. Journ. ii. p. 52 (1825); Steph. Gen. Zool. xiv. 2, p. 127 (1826).

Palæornis eyanocephalus, G. R. Gr. List Psitt. Brit. Mus. p. 21 (1859); id. P. Z. S. 1860, p. 356; id. Hand-list, ii. p. 143, n. 8061 (1870); Salvad. Orn. Pap. e Mol. i. p. 326 (1880).

## Yellow Variety.

Jonquil Parrakeet, Lath. Syn. Suppl. ii. p. 83, pl. 123 (1802); Shaw, Gen. Zool. viii. 2, p. 427 (1811); Lath. Gen. Hist. ii. p. 143, pl. 23 (1822).

Psittacus narcissus, Lath. Ind. Orn. Suppl. p. xxi (1801); Vieill. N. D. xxv. p. 353 (1817); id. Enc. Meth. iii. p. 1391 (1823).

Adult male. Olive-green; head red, tinged with plum-bloom on the hind part and on the lower cheeks; black mandibular stripes joined to a narrow black collar; hind neck and rump verdigrisgreen; back and scapulars olive-green; breast, abdomen, and under tail-coverts yellowish green; wings green, upper wingcoverts slightly edged with verdigris-green; a dark red spot on the middle wing-coverts; quills dusky internally, and with a narrow vellow outer margin; axillaries and under wing-coverts verdigrisgreen; central tail-feathers blue, washed with green at the base and with the tips white, the next pair more green towards the base, the others green on their outer webs, yellow internally; tail underneath mostly yellowish: iris white or yellowish white; upper mandible orange-yellow, lower mandible blackish; feet dusky sage-green. Total length 14-15 inches, wing 5.6, tail 8-9, bill 0.7, tarsus 0.5.

Female. Smaller than the male; the head dull plum-blue, more greyish on the forehead and cheeks; a yellow collar, broader on the sides of the neck; no black collar and no black mandibular stripes; no red patch on the median upper wing-coverts: upper mandible vellow, lower dusky or blackish.

Young. Green, brightest on the rump and lower back, paling slightly on the forehead; a slight indication of a pale green collar on the nape; central tail-coverts washed with blue; bill greenish

vellow.

In the next stage the forehead becomes paler and the head bluish, with a dusky edge bordering the lower mandible; the middle rectrices are blue, as in the adult, but with less of the white colour at the extremity (*Legge*).

Hab. Ceylon; Southern, Central, the whole of Northern and

Western India, and the Himalayas as far east as the Dhoon.

India. J. R. Reeves, Esq. a. Ad. st. [P.]. Hume Coll. Ceylon, Nov. (Hart Bros.). b-e.  $\exists \ \$ 2 ad. et

imm. sk.

f-p.  $d \circ ad$ . sk. q, r, s. d ad. sk.

t-y.  $\mathcal{J} \ Q$  ad. sk. z.  $\mathcal{J}$  ad. sk.

a'-d'. ♂♀ ad. et imm. sk. e'. ♂ ad. \*sk. f'. Ad. sk. g'. ♂ ad. sk. h', i', k'. ♂♀ ad. sk.

l'. d imm. sk.

m', n', o'.  $\circlearrowleft$   $\circlearrowleft$  ad. sk. p', q', r'.  $\circlearrowleft$  ad. sk. s'.  $\circlearrowleft$  imm. sk.

t'. ♀ ad. sk.

n', v'. ♂ ad. sk.
w'. Ad. sk.
x'. ♂ ad. sk.

y'. Ad. sk. z'. Ad. sk.

 $a^{\prime\prime}$ . Q ad. sk.  $b^{\prime\prime}$ ,  $e^{\prime\prime}$ . Ad. sk. et st.

d''. d ad. sk. e''. d imm. sk. f''-k''. d Q ad. sk.

l''-p''.  $\circlearrowleft Q$  ad. et imm. sk. q''-t''.  $\circlearrowleft Q$  ad. sk. u''.  $\circlearrowleft$  ad. sk.

v''-x''.  $\not\subset Q$  ad. sk.  $y''-b^3$ . Ad. sk.  $e^3$ .  $\not\subset imm$ . sk.

13. ♂ ad. sk.

 $e^3$ ,  $f^3$ .  $\circlearrowleft$  Q ad. sk.  $g^3$ .  $\circlearrowleft$  ad. sk.  $h^3$ .  $\circlearrowleft$  ad. sk.  $i^3-m^3$ .  $\circlearrowleft$  Q ad. sk.

Ceylon (Neville).
Pusiawella, Ceylon, March &
Dec. (S. Chapman).
Ceylon.
Ceylon, November.

Anjango, Travancore, Dec.

Calicut, March (R. G. W. R.). Malabar. Cannanore, Oct. (R. G. W. R.). Nilghiris, April.

Coonoor Ghât, Sept. (R. G. W. R.).

Seegore, February.
Kullar, October (W. Davison).
Nellacotta, March (W. Davison).

Manantoddy, May (W. Davison).

Wynaad, April (W. Davison). N. Canara, April. Belgaum, August (Capt. Butler).

Western Ghâts. Deccan (Sykes).

Madras (R. M. Adam). Madras.

S.E. Berar, January. Nagar, Aug. (S. B. Fairbank). Khandala, April, May (S. B. Fairbank).

Ahmednugger, Oct., Dec. (S. B. Fairbank).

Seoni.
Maunbhoom, Dec. (R. C. Beavan).

Khandeish, Dec. (*J. Davidson*). Khandeish. Manpore, May.

Mhow, Oct.

Godra-Pauch Mehals, Sept. Mt. Aboo, May (Capt. Butler). Oodypur, Feb. (A. O. II.). Sambhur, May, June (R. M. Adam). Delhi.

Delhi, Sept. (W. N. Chill). Hissar, Oct.

Pind Dadun Khan, Feb. Simla.

Tweeddale Coll.
Tweeddale Coll.

Tweeddale Coll. W.V. Legge, Esq. [P.]. Hume Coll.

Tweeddale Coll.
Tweeddale Coll.
Tweeddale Coll.
W. Davison, Esq.
[P.].
Tweeddale Coll.

Hume Coll. Hume Coll. Hume Coll.

Hume Coll.

Hume Coll. Hume Coll. Hume Coll.

Gould Coll.
India Museum
[P.].
Hume Coll.
Rev. H. Baber
[P.].
Hume Coll.
Tweeddale Coll.
Tweeddale Coll.

Tweeddale Coll.

Hume Coll. Tweeddale Coll.

Hume Coll.
Tweeddale Coll.
Col. Swinhoe
[P.].
Col. Swinhoe

[P.]. Hume Coll. Hume Coll.

Hume Coll. Hume Coll.

Hume Coll. Hume Coll. Hume Coll.

Hume Coll.

t³. Ad. sk.
 u³. ♂ ad. sk.
 v³. ♂ ad. sk.

w3. Ad. sk. (var.).

 $x^3$ . Ad. sk.  $y^3, z^3$ .  $\mathcal{S} \ \$  ad. sk.  $a^4, b^4$ .  $\mathcal{S}$  ad. sk.  $c^4$ . Ad. sk.

 $d^4$ ,  $e^4$ ,  $f^4$ . Ad. et imm. sk. et st.  $g^4$ . Ad. st. (var.).  $h^4-l^4$ . Ad. sk.

m4. Ad. sk.

 $n^1$ ,  $o^4$ ,  $p^4$ .  $\circlearrowleft$  ad. et imm. sk.  $q^4$ – $u^4$ .  $\circlearrowleft$   $\circlearrowleft$  ad. sk.

 $v^4$ . Skeleton.

N. of Mussooree.

Dehra Dhoon, Feb. (G. King). Gangootree Valley, May (W. E. Brooks).

Kumaon (Strachey).

N. India. Etawah.

Cawnpore, Feb. (W. E. Brooks). Plains of India (Capt. S. Pinwill).

Behar.

India. Nepal.

Nepal (B. H. Hodgson).

Nepal, Nov. & Dec. (J. Scully). Bhotan Doars, Jan. & Feb.

(L. Mandelli).

Hume Coll. Hume Coll. Hume Coll.

India Museum

Gould Coll.
Hume Coll.
Hume Coll.
Tweeddale Coll.

B. H. Hodgson, Esq. [P.]. Purchased. B. H. Hodgson, Esq. [P.].

India Museum
[P.].

Hume Coll.

Hume Coll.

Zool. Soc. Coll.

#### 10. Palæornis rosa.

Rose-headed Ring Parrakeet, *Edw. Glean.* pl. 233 (1758); *Lath. Syn.* i. p. 239, n. 39 A (1781).

Psittaca bengalensis, Briss. Orn. iv. p. 348 (1760). Perruche de Mahé, D'Aubent. Pl. Enl. 888 (3 ad.).

La Petite Perruche à tête couleur de rose à longs brins, Buff. Hist. Nat. Ois. vi. p. 154 (1779).

Psittaeus rosa, *Bodd. Tabl. Pl. Enl.* p. 53 (1783); *Wald. B. of Burm.* p. 56 (1875).

Psittacus bengalensis, Gm. S. N. i. p. 325, n. 74 β (1788); Vieill.
 Enc. Méth. iii. p. 1392 (1823); Voigt, Cuv. Uebers. p. 728 (1831)
 Sundev. Physiogr. Süllsk. Tidskr. 1837, p. 175.
 Psittacus ginginianus, var. β, Lath. Ind. Orn. i. p. 100 (1790).

Psittacus ginginianus, var.  $\beta$ , Lath. Ind. Orn. i. p. 100 (1790). ? La Perruche à collier noir, Levaill. Perr. i. p. 130, pl. 45 ( $\eth$ ) (1801).

? Psittaeus erythrocephalus, Kuhl (nec Gm.), Consp. Psitt. p. 31 (1820).

? Palæornis bengalensis, Vig. Zool. Journ. ii. p. 54 (1825); Steph. Gen. Zool. xiv. 2, p. 128 (1826).

Palæornis bengalensis (part.), Wagl. Mon. Psitt. p. 515 (1832); G. R. Gr. Gen. B. ii. p. 409, n. 5 (part.) (1846); Gray, Cat. Hodys. Coll. B. Mus. p. 113 (part.) (1846); Licht. Nomencl. Ar. p. 71 (1854); G. R. Gr. Hand-list, ii. p. 142, n. 8053 (1870); Jerd. Ibis, 1872, p. 6; Hume, Str. Feath. i. p. 433 (1873), ii. pp. 9, 16 (1874), iii. p. 56 (1875); Armstr. Str. Feath. iv. p. 308 (1876); Hume, Str. Feath. v. p. 21 (1877); Oates, Str. Feath. vii. p. 46 (1878).

Palæornis cyanocephalus (part.), Blyth, Cat. B. Mus. A. S. B. p. 5, n. 21 (1849); Gould, P. Z. S. 1859, p. 150 (Tavoy), p. 151 (Siam); Finsch, Papag. ii. p. 40 (part.) (1868): Wald. Ibis, 1874, p. 284 (part.): Blyth & Wald. B. of Burmah, p. 55 (1875);

? Swinh. Ibis, 1875, p. 123; Gieb. Thes. Orn. iii. p. 8 (part.) (1877); David et Oust. Ois. Chine, p. 3 (1877); Hume & Davis. Str. Feath. vi. p. 118 (1878); Anders. Yunn. Exped. p. 568 (1879); Hume, Str. Feath. viii. p. 86, n. 149 bis (1879); Bingh. Str. Feath. ix. p. 160 (1880); Oates, B. of Burm. ii. p. 145 (1883); Tristr. Cat. Coll. B. p. 75 (1889); Murv. B. of Brit. Ind. ii. p. 467 (1890); Oates, Nests & Eggs Ind. B. iii. p. 88 (1890).

Parrakeet from near Canton, Swinh. Ibis, 1861, p. 411.
Palæornis rosa, Jerd. B. of Ind. i. p. 259 (part.) (1862); Swinh.
P. Z. S. 1863, p. 259; Blyth, Ibis, 1866, p. 353 (part.), 1870,
p. 162 (part.); Swinh. P. Z. S. 1871, p. 391; Selat. P. Z. S. 1879, p. 300; Relmw. Journ. f. Orn. 1879, p. 211; Legge, B. of Ceyl. p. 175 (1880); Rehmw. Vogelbild. t. xiii. f. 5 (1878–83); id. Journ. f. Orn. 1881, p. 238 (Consp. Psitt. p. 126); Sclat. List Vert. An. 8th ed. p. 322 (1883); Salvad. Ann. Mus. Civ. Gen. (2) iv. p. 575 (1887), v. p. 560 (1888).

Palæornis evanocephala, Gould (nec Linn.), B. of Asia, vi. pl. 3

(pt. xxvi., 1874).

? Palæornis bodini, Russ, Gefied. Welt, vii. p. 359 (1878); Rehnw. Orn. Centralbl. iii. p. 182 (1878); Ibis, 1879, p. 100.

Very similar to P. cyanocephalu, but in both sexes the axillaries and under wing-coverts are green and not verditer-green. Dimensions smaller.

Adult male. The head is much paler than that of P. cyanorephala, rosy pink on the forehead, cheeks, and ear-coverts, changing into greyish lilac on the crown and nape; no broad verditer-green collar, no tinge of the same colour on the uropygium; back, scapulars, and underparts less yellowish and more decidedly green; red spot on the wing-coverts darker; white tips of the two middle tail-feathers tinged with yellowish. Total length 13 inches, wing 5.5, tail 7, bill 0.72, tarsus 0.49.

Female. Has the dark red spot on the wing-coverts like the male, the head more greyish and less blue than that of P. cyanocephala, female; the yellow collar less distinct on the sides of the neck; the green colour above and below purer, and no verditer-green

tinge on the uropygium.

Hab. Sikhim, Dacca, Eastern Bengal, Assam, Upper Burmah, and eastwards as far as Cochin China, and Southern China (Swinhoe).

Blyth (Ibis, 1866, p. 353) mentions a specimen in Mr. Louis Fraser's collection with a green tail; Herr Russ (Gefied. Welt, vii. p. 359) describes a Palarornis bodini, with the middle tail-feathers not blue, but green, which Dr. Reichenow (Orn. Centralbl. iii. p. 182) has identified with P. rosa! I have never seen a greentailed specimen.

In Swinhoe's collection, now in the possession of Mr. Seebohm, were two specimens said to have come from China; the one from Chefoo, Oct. 5, 1873, which has been lately presented to the British Museum, is certainly a cage-bird, and that from Canton may have

been brought alive to Canton and escaped from confinement.

*α−f*. Λd. sk. Nepal (B. II. Hodgson). *q*, *h*. Ad. sk. Nepal.

India Museum [P.]. B. H. Hodgson, Esq. [P.].

i. Ad. st.	Nepal.	B. H. Hodgson, Esq.
7. 7. 2 od ala	Davidalina Wani Jan	[P.].
k, l. d ad. sk.	Darjeeling Terai, Jan.	Hume Coll.
m. Q ad. sk.	Darjeeling, March.	Hume Coll.
n, o. ♂♀ad. sk.	Monghoo, March.	Hume Coll.
p. Ad. sk.	Buxa Doars, Jan.	Hume Coll.
$q-y'$ . $\mathcal{S} \ \mathcal{Q} \ \text{ad. sk.}$	Bhotan Doars, Jan., Feb., April,	Hume Coll
$h'$ , $i'$ . $\circlearrowleft$ ad. sk.	May, & Dec. (L. Mandelli). Suddya, Assam, May, June (J. Cockburn).	Hume Coll.
$k', l'. \not \supseteq ad. sk.$	Dibrughur, March (J. R. Cripps).	Hume Coll.
m'. ♂ ad. sk.	Cachar (J. Inglis).	Hume Coll.
n'. & ad. sk.	Irrawaddy Delta.	Hume Coll.
o'. 3 ad. sk.	Palow, Pegu Division, April.	Hume Coll.
$p'$ . $\beta$ imm. sk.	Borougho Is., Akyab, March	Hume Coll.
•	(J. Armstrong).	
$q'$ . $\eth$ imm. sk.	Parrot Creek, Feb. (J. Arm-strong).	Hume Coll.
$v'-v'$ . $\mathcal{J} \ \mathcal{Q} \ \text{ad. et}$ imm, sk.	Elephant Point, Dec. (J. Arm-strong).	Hume Coll.
w', x'. $Q$ ad. et $g$ imm. sk.	China Ba Keer, Dec. (J. Arm-strong).	Hume Coll.
$y', z'$ . $\beta \ Q \ ad. sk$ .	Upper Burmah, Jan.	J. Anderson, Esq.
a". d ad. sk.	Momien, Yunan, July.	J. Anderson, Esq.
$b^{\prime\prime},c^{\prime\prime},d^{\prime\prime}.$ Ad. sk.	Karen Hills, Aug., Oct. (R. G. W. R.).	[C.]. Tweeddale Coll.
$e^{\prime\prime}$ . $\ $ 2 ad. sk.	Toughoo Hills, March (R. G. W. R.).	Tweeddale Coll.
f''-s''. ♂♀ ad. sk.	Tonghoo, Jan., April, May, Nov., Dec. (R. G. W. R.).	Tweeddale Coll.
$t'', u''$ . $\sigma$ ad. et juv. sk. $v''$ . $\sigma$ ad. sk. $w''$ , $x''$ . $\varphi$ ad. sk.	Lower Pegu, Jan.	E. W. Oates, Esq. [C.].
$v''$ . $\mathcal{J}$ ad. sk.	Kaukaryit, Oct. (J. Darling).	Hume Coll.
w'', x''. Q ad. sk.	Kyouk-nyat, Jan. (W. Davison).	Hume Coll.
$y''-f^3$ . $\beta = ad$ .	Pahpoon, Salween, Dec., Jan.	Hume Coll.
et imm. sk.	(W. Davison).	
$g^3$ . $Q$ ad. sk.	Thoungyeen R., Oct.	C. T. Bingham, Esq. [P.].
$k^3$ , $i^3$ . $d \supseteq ad. sk$ . $k^3-s^3$ . $d \supseteq ad. sk$ .	Theinzeik, Jan. (W. Davison).	Hume Coll.
	Thatone, Jan., Oct., Nov., Dec. (W. Davison).	Hume Coll.
$t^3$ . $\delta$ ad. sk.	Thatone, Oct. (R. C. Beavan).	Tweeddale Coll.
$u^3$ . $\mathcal{J}$ ad. sk.	Wimpong, Jan. (W. Davison).	Hume Coll.
$v^3$ . $\mathcal{J}$ ad. sk.	Houngthraw R., Jan. (W. Davi-	Hume Coll.
$w^3, x^3, y^3$ . $d \circ \varphi$	Tavoy, March & May (W. Davi-	Hume Coll.
ad. sk. $z^3$ . $\delta$ ad. sk. $a^4$ , $b^4$ . $\delta$ ad. et	Noulmoin Fob (H' Danison)	Humo Coll
at bt And of	Moulmein, Feb. (W. Davison). Moulmein, Oct. (R. C. Beavan).	Hume Coll.
imm ek	mounnein, Oct. (A. C. Deavan).	Tweeddale Coll.
imm. sk.	Moulmein, Feb. & Dec. (W.	Humo Coll
$e^4$ , $d^4$ , $e^4$ . $\mathcal{J}$ ad. et imm. sk.	Davison).	Hume Coll.
f. of ad. sk.	Salween Dist., Dec. (W. Davi-	Hume Coll.
, , , , , , , , , , , , , , , , , , , ,	son).	

Shuay-g-yeen, Brit. Burmah,  $g^4, h^4$ .  $[\ \ \ ]$  ad. sk. Jan. (R. G. W. R.). H-touk-yan, Brit. Burmalı (R. G. W. R.). i. 3 ad. sk. Amherst, Jan., Feb., Mar., Dec.  $k^4-p^4$ .  $\not\subset \$ ad. et imm. sk. (W. Davison).  $q^4-t^4$ . Ad. sk.  $u^4$ . [5] ad. sk.  $v^4-x^4$ . Bones of Cochin China, Aug., Dec. Chefoo, Oct. [Nepal.] Perhaps Sikhim.

the trunk.

Tweeddale Coll.

Tweeddale Coll.

Hume Coll.

M. St. Pierre [P.]. Swinhoe Coll. B. H. Hodgson, Esq. P.].

## 11. Palæornis schisticeps.

Palæornis schisticeps, Hodgs, As. Res. xix. p. 178 (1836); Blyth, J. A. S. B. x. p. 925 (1841); Hodgs. Gray's Zool. Misc. p. 85 (1844); Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); Gray, Cat. Hodgs. Coll. B. Mus. p. 113 (1846); Blyth, Cat. B. Mus. A. S. B. p. 5 (1849); G. R. Gr. Gen. B. App. p. 19 (1849); Blyth, J. A. S. B. xix. p. 232 (1850); Bp. Rev. et Mag. de Zool, 1854, p. 152, n. 143; Souancé, Rev. et Mag. de Zool. 1856, p. 158; Bp. Naumannia, 1856, Consp. Psitt. n. 141; Horsf. & Moore, Cat. B. Mus. E. I. Comp. ii. p. 615 (1856-58); Gould, B. of Asia, vi. pl. 8 (bt. x., 1858); Adams, P. Z. 8, 1858, p. 491, 1859, p. 173; G. R. Gr. List Psitt. Brit. Mus. p. 22 (1859); Souancé, Icon. Perr. pl. 43 (d) (1859); Jerd. B. of Ind. i. p. 261 (1862); Blyth, Ibis, 1863, p. 4; Gray, Cat. Hodgs. Coll. B. Mus. 2nd ed. p. 61 (1863); Schleg. Mus. P.-B. Psittaci, p. 82 (1864): Blyth, Ibis, 1866, p. 353; Bulger, P. Z. S. 1866, p. 568; Beav. Ibis, 1867, p. 142; ? Swinh. Ibis, 1867, p. 389; Blyth, Ibis, 1868, p. 132; Pelz. Journ. f. Orn. 1868, p. 35; Tytler, Ibis, 1868, p. 201; Pelz. Ibis, 1868, p. 319; Brooks, Ibis, 1869, p. 47; Beav. Ibis, 1869, p. 411; G. R. Gr. Hand-list, ii. p. 142, n. 8055 (1870); ? Swinh. P. Z. S. 1871, Halla-lest, H. B. 142, H. 8035 (1870); † Sacala. I. Z. S. 1841, p. 391 (Upper Yangtsze); Jerd. Ibis, 1872, p. 6; Hume, Str. Feath. ii. p. 17 (1874); Wald. Ibis, 1874, p. 286; Schleg. Mus. P.-B. Psittaci, Revue, p. 35 (1874); Hume, Str. Feath. viii. p. 86, n. 150 (1879); Salv. Cat. B. Strickl. Coll. p. 457 (1882); Marsh. Ibis, 1884, p. 410; Tristr. Cat. Coll. B. p. 75 (1889); Murr. Avif. of Park Lyd. ii. 2466 (1890); Octor North & Farm Lyd. P. iii. of Brit. Ind. ii. p. 466 (1890); Oates, Nests & Eggs Ind. B. iii. p. 89 (1890).

Palæornis hodgsoni, Finsch, Papag. ii. p. 50 (1868); Gieb. Thes. Orn. iii. p. 9 (1877); Rehnw. Vogelbild. t. xiii. f. 4 (1878–83): id.

Journ. f. Orn. 1881, p. 236 (Consp. Psitt. p. 124).

Adult male. Green; underparts lighter and more yellowish; head slate-black, with a slight bluish tinge; chin and mandibular stripes black, these joining a narrow black nuchal collar; hind neck tinged with verdigris; on the median wing-coverts a dark cherry-red patch; primaries with the outer webs dark green, edged very narrowly with yellowish, and with the inner webs dark grey; under wing-coverts verdigris; the metacarpal edge yellow; central tail-feathers blue in the middle, more or less green at the base, bright yellow at the apical half; the other tail-feathers green on the outer webs, yellow on the inner, and with the tips yellow; tail underneath yellow: "bill above coral-red, hook and the whole of the lower mandible yellow; iris straw; orbital skin slaty; legs and feet dusky green"

(Hodgson). Total length 15.8 inches, wing 6.5, tail 9.3, bill 0.95, tarsus 0.58.

Female. Wants the dark red wing-patch.

Young. Head green; the black mandibular stripes and collar (defining the slaty dusky head in the adult) are entirely wanting; the checks brownish green; on the back of the neck a faint paler green band defines the cap: "both mandibles are of a pale yellowish horny, brownish towards the base of the upper mandible" (Hume).

Hab. North of India, where it is confined to a narrow zone lying between the bases of the sub-Himalayan ranges and the first high

snowy ridge (Hume).

a. Ad. sk.	Pushut,	India Museum [P.]. India Museum [P.].
b, c. Ad. sk.	Olipore.	India Museum [P.].
d. Imm. sk.	Cashmere.	India Museum P.J.
e. Ad. sk.	N. India.	Gould Coll.
f. of ad. sk.	Murree (J. Biddulph).	Tweeddale Coll.
g. ♂ ad. sk.	Koteghur.	Hume Coll.
h. ♂ ad. sk.	Kotekhaie, February.	Hume Coll.
i. ♂ ad. sk.		Hume Coll.
. 0 att. sk.	Sikrah Dhami, March (F. J. Thompson).	Tittine Con.
$k-y$ . $\beta \subsetneq ad$ . et	Simla, July, Oct., Nov. (W.	Hume Coll.
imm. sk.	Davison).	
z. Q imm. sk.	Simla, July (R. C. Beavan).	Tweeddale Coll.
a'. o ad. sk.	Syree, near Simla, Nov. (F. J.	Hume Coll.
	Thompson).	22111110 0011,
$b', c', d'$ . $\mathcal{J}$ ad. sk.	Near Mussooree.	Hume Coll.
$e'$ . $\circlearrowleft$ imm. sk.	Dehra $(J. Biddulph)$ .	Tweeddale Coll.
f'. Ad. sk.	Khalsi, April (G. F. L. Mar-	Tweeddale Coll.
·	shall).	
y'. 8 ad. sk.	Khalsi, February (G. F. L. M.).	Tweeddale Coll.
h', i', k'. o ad. et	Near Almorah, October.	Hume Coll.
♀ imm. sk.	2. our minoral obtainer.	iiiiiio coii.
l'. ♂ ad. sk.	Kumaon.	Hume Coll.
an' a' Ad alz		
m', n'. Ad. sk.	Kumaon (Strachey).	India Museum [P.].
o'. Ad. sk.	N.W. India.	Capt. Stackhouse
/ 43 1	0.1 // 1/6 // 191	Pinwill [P.].
p'. Ad. sk.	Oude Terai (S. Pinwill).	Tweeddale Coll.
$q'$ . $\mathcal{J}$ imm. sk.	Nepal Valley, January $(J.$	Hume Coll.
	Scully).	
$r'$ . $\mathcal{J}$ ad. sk.	Nimboatar, Nepal. Dec. $(J.$	Hume Coll.
	Scully).	
s'. Ad. st.	Nepal.	B. H. Hodgson, Esq.
	1	TD 1
t'- $w'$ . Ad. et	Nepal.	B. H. Hodgson, E-q.
imm, sk,	Print	P.7.
1111414, 614,		
x'. Ad. sk.	Nepal (B. H. Hodgson).	(Types of species.)
		India Museum [P.].
$y'-f''$ . $\beta \circ \alpha$ ad.	Sikkim, JanApril & Dec.	Hume Coll.
et imm. sk.	(L. Mandelli).	H C-11
$g^{\prime\prime}$ , $h^{\prime\prime}$ , $i^{\prime\prime}$ . $\eth$ ad.	Darjeeling.	Hume Coll.
et 2 imm. sk.	DL . D. T. 47	II 0 11
$k^{\prime\prime}$ , $l^{\prime\prime}$ . Ad. sk.	Bhotan Doars, January (L.	Hume Coll.
U T 3	Mandelli).	T 11 15
m''. Imm. sk.	Bhotan.	India Museum [P.].

#### 12. Palæornis finschi. (Plate XII.)

Palæornis schisticeps, Mason (nec Hodys.), Burmah, p. 179 (1860).

? Palæornis rosa, Beav. (nee Bodd.) Ibis, 1869, p. 411.

Paleornis finschi, Hume, Str. Feath. ii. p. 509 (1874); Wald. in Blyth's B. Burm. p. 55 (1875); Gieb. Thes. Orn. iii. p. 820 (1877); Hume & Davis, Str. Feath. vi. p. 119 (1878): Hume, Str. Feath. viii. p. 86, n. 150 bis (1879); Bingh. Str. Feath. ix. p. 160 (1880); Rchnw. Vogelbild. text of pl. 13. f. 4 (1878-83); id. Journ. f. Orn. 1881, p. 237 (Consp. Psitt. p. 125); Oates, Str. Feath. x. p. 189 (1882); id. B. of B. Burm. ii. p. 142 (1883); Hartert, Journ. f. Orn. 1889, p. 431.

? Palæornis schisticeps, Blyth (nec Hodgs.?), B. of Burm. p. 55

(Arrakan) (1875); Hume, Str. Feath. iii. p. 56 (1875).

Adult male. Very similar to the male of P. schisticeps; the green feathers have a more yellowish tinge; the back is slightly tinged with brownish or golden yellow; the slaty-black head is more bluish; the basal half of the central tail-feathers is blue, more or less green at the extreme base, the terminal half is pale lilac, tipped with yellow: "legs and feet pale dirty green; upper mandible orange-vermilion, tipped yellowish; lower mandible pale yellow; irides usually creamy white, but in some specimens grey, with a fine inner ring of golden yellow; in others pale brown, with an outer ring of white" (Davison). Total length 16.5 inches, wing 6, tail 11, bill 0.9, tarsus 0.58.

Female. Like the male, but wants the dark red wing-patch;

dimensions a little smaller.

Hab. Burmah; probably it extends towards the north as far as

Arrakan.

Besides the differences mentioned above, the much narrower central tail-feathers also distinguish the present species from *P. schisticeps*.

a, b. ♂ ad. et ♀ imm. sk.	Tonghoo Hills, Jan., March (R. G. W. R.).	Tweeddale Coll.
c. ♀ ad. sk.	Karennee.	Tweeddale Coll.
d. Ad. sk.	Pegu.	Tweeddale Coll.
e. ∂ ad. sk.	Kollidoo, Feb. (W. Davison).	Hume Coll.
		(Type of species.)
f-l. ♂♀ ad. sk.	Kollidoo, Feb. & Sept. (W. Davison).	Hume Coll.
m. ♂ ad. sk.	Moulmein, Nov. (C. T. Bing-ham).	Hume Coll.
n. 3 ad. sk.	Thoungyeen Valley, Jan. (C. T. Bingham).	Hume Coll.
o. 3 ad. sk.	Myawadee, Jan. (W. Davison).	Hume Coll.
p. of ad. sk.	Myawadee, February.	C. T. Bingham, Esq.
<i>q-x</i> . ♂♀ ad. sk.	Kyouk-nyat, January (W. Davison).	Hume Coll.
y. ♂ ad. sk.	Pakchan Creek (W. Davison).	Hume Coll.

#### 13. Palæornis exsul.

Palæornis exsul, A. Newt. Ibis, 1872, p. 33 (♀); id. P. Z. S. 1875, p. 42; id. Ibis, 1875, p. 342, pl. vii. (♀); Caldwell, P. Z. S. 1875, p. 647; A. & E. Newt. Ibis, 1876, pp. 288 (♀), 289; Hartl. Vöy. Madag. p. 225 (1877); Gieb. Thes. Orn. iii. p. 9 (1877); Oust. Bull. Soe. Philom. Paris, 1878, p. 166; Rehnw. Journ. f. Orn. 1881, p. 235 (Consp. Psitt. p. 123); id. Vogelbild. Nachtr. 58 (1883).

Female. "General appearance greyish glaucous, darker above than beneath. From the corners of the mouth proceeds an ill-defined dull black chin-stripe, which becomes broader as it passes backward and upward, ceasing somewhat abruptly on reaching the level of the Head, nape, shoulders, upper wing-coverts, and rectrices above dull greyish glaucous, the blue tinge in which predominates when the bird is seen against the light, and the green when seen in the contrary aspect; the outer rectrices paler. Rump verditer-blue. Primaries with their outer and most part of their inner webs deep greenish blue, the former with narrow lighter edges, and the latter broadly bordered with pitch-black \*; shafts and lower surfaces greyish black. Secondaries much the same as the primaries, but of a still deeper shade. Breast dull greyish glaucous, but lighter than the upper parts, and passing on the belly into verditer, which become lighter and greener on the vent. Rectrices beneath yellowish grey, darker towards the tips of the longer feathers. Bill black. Total length 16 inches, wing 7.5, tail 8.5, bill 1, tarsus 0.6." (A. Newton.)

Male. "It differs from the type (Q) at first sight by its maxilla, which is crimson at the base, gradually paling to horn-colour at the tip. The mandible in life seems to have been of a deep reddish brown. The top of the head is less grey and of a clearer glaucous than in the female. From the nostril to the eye on each side there is a distinct narrow black stripe, which is so faintly indicated in the female that no notice was taken of it in the original description. The black chin-stripe on each side is also well defined, and is prolonged upwards so as almost to meet on the nape of the neck †. Most of the primaries are marked each by a dull black patch on the inner web near the tip; and the middle secondaries are also dusky black." (A. Newton.) There is no red alar patch on the wing-coverts.

Size slightly larger than the female.

Hab. Rodriguez, where most likely by this time it is extinct.

Prof. Newton, before receiving a male specimen, prognosticated that the male would have a red alar patch, but when he received one he found, to his disappointment, that the alar patch was wanting ('Ibis,' 1876, p. 288); both Dr. Oustalet and Dr. Reichenow, having overlooked the last statement of Prof. Newton. described the male with a red alar patch!

<sup>\*</sup> These black patches, which appear on many other feathers, are very irregularly disposed and no doubt are due to abrasion. † Most likely there is a complete collar round the nape in perfect specimens.

## 14. Palæornis peristerodes.

Palæornis columboides, Vig. Zool. Journ. v. p. 274 (1830); Wagl. Mon. Psitt. p. 519 (1832); Lear, Parr. pl. 31 (1832); Jerd. Madr. Journ. xi. p. 209, pl. 3 (1840); id. Ill. Ind. Orn. pl. 18 (1847); Hartl, Syst. Verz. Ges. Mus. p. 85 (1844); G. R. Gr. Gen. B. ii. p. 410, n. 9 (1846); Blyth, J. A. S. B. xvi. p. 475 (1847); id. Cat. B. Mus. A. S. B. pp. 5, 316 (1849); id. J. A. S. B. xix. p. 204 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 144; Souance, Rev. et May. de Zool. 1856, p. 158; Bp. Naumannia, 1856, Consp. Psitt. n. 143; Horsf. & Moore, Cat. B. Mus. E. I. Comp. ii. p. 614 (1856-58); Gould, B. of Asia, vi. pl. 7 (pt. x., 1858); G. R. Gr. List Psitt. Brit. Mus. p. 22 (1859); Jerd. B. of Ind. i. p. 261 (1862); Blyth, Ibis, 1863, p. 4; Schleg. Mus. P.-B. Psittaci, p. 83 (1864); Blyth, Ibis, 1866, p. 553; Sousa, Mus. Nac. Lisboa, Psittaci, p. 15 (1869); G. R. Gr. Hand-list, ii. p. 142, n. 8056 (1870); Elwes, Ibis, 1870, p. 527; Blanf. Ibis, 1874, p. 92; Hume, Str. Feath. ii. p. 21 (1874); Wald. Ibis, 1874, p. 292; Schleg. Mus. P.-B. Psittaci, Revue, p. 35 (1874); Blyth, B. of Burm. p. 54 (note) (1875); Hume, Str. Feath. viii. p. 86, n. 151 (1879); Layard, This, 1880, p. 284 (Ceylon!); Tweedd. Orn. Works, p. 282 (1881); Salv. Cat. B. Stricki. Coll. p. 457 (1882); Sclat. List Vert. An. 8th ed. p. 322 (1883); Tristr. Cat. Coll. B. p. 75 (1889); Murr. Avif. of Brit. Ind. ii. p. 465 (1890); Oates, Nests & Eggs Ind. B. iii. p. 89 (1890).

Palæornis melanorhynchus, Sykes (nec Wagl.), P. Z. S. 1832, p. 96

(우).

Psittacus (Conurus) himalayanus, Less. in Bélanger, Voy. aux Ind., Zool. p. 239 (1834).

Conurus sagittifer colomboides, Bourj. Perr. pls. 3 (♂), 3 bis (♀)

(1837-38).

Conurus sagittifer colomboides vel kienerii, Bourj. Perr. p. xlix (1837-38).Psittacus melanorhynchus, Sund. Physiogr. Sällsk. Tidskr. 1838, i.

Palæornis peristerodes, Finsch, Papay. ii. p. 74 (1868); Gieb. Thes. Orn. iii. p. 10 (1877); Rehnw. Vogelbild. t. xiii. f. 3 (1878-83);

id. Journ. f. Orn. 1881, p. 239 (Consp. Psitt. p. 127).

Adult male. Head, neck, upper back, and breast dove-grey; forehead, lores, and region round the eyes green; the green of the forehead is slightly bordered behind with blue; the broad black mandibular stripes join a black collar, succeeded by a second one of a bluish green, which widens on the throat; lower back, uropygium, and upper tail-coverts bluish green; lower abdomen, vent, and under tail-coverts yellowish, washed with bluish green; wings and scapulars dark green, more or less tinged with blue; upper wing-coverts with pale edges; under wing-coverts bluish green; first primary black, the others blue edged with green; central tail-feathers blue, washed with green at the base, tipped with yellowish; the next pair blue on the outer web, greenish near the base, all the others green on the outer web, yellow on the inner one; the tips of all the tailfeathers yellowish; tail underneath yellow: "upper mandible red, with the point horny white; lower mandible dusky or dingy reddish" (Hume): legs greenish plumbeous. Total length 15.5 inches, wing 5.8, tail 9.5, bill 0.9, tarsus 0.58.

Female. Wants the bluish-green collar and the green forchead; there is a slight bluish tinge on the lores and very little green round the eyes; the interscapular region is pale green, like the breast and the abdomen; bill dusky black. Dimensions somowhat smaller than those of the male: total length 14.5 inches, tail 8.5.

Young. The grey of the adult bird replaced by green, more or less tinged with blue on the head, especially in the female; both green and black collars are wanting; the black mandibular stripes are

slightly indicated.

Hab. South of India, from Travancore up to N. lat. 17° or so (Jerdon).

a. Ad. st. Purchased. Erridge, S. Travancore, March.  $b, c. \ \beta \$  ad. sk. Hume Coll. Ashanboo, S. Travancore, Jan. d. 3 ad. sk. F. Bourdillon [C.]. Mynall, S. Travancore, Jan. &  $e, f. \ \ \ \ \ \ \ \ \$ ad. sk. Hume Coll. Nov. (F. Bourdillon). Mynall, S. Travancore, Oct. &  $y, h. \not \subseteq \Omega$  ad. sk. F. Bourdillon [C.]. Nov. Malabar. Tweeddale Coll. i, k. Ad. sk.  $l, m. \subseteq ad. et$ Kullar, Nov. Hume Coll. imm. sk. p, o. o o ad. sk. o. o ad. sk. Kullar, Nov. (R. G. W. R.). Tweeddale Coll. India Museum [P.]. q, r. ♂♀ ad. sk. Ootacamund, Nilghiris, Feb. Hume Coll. (W. Davison). Coonoor Ghat, Nilghiris, Jan. s-w.  $\mathcal{J} \Omega$  ad. sk. Hume Coll. (W. Davison). Coonoor Ghat, Nilghiris, April x. Q ad. sk. Tweeddale Coll. (R. G. W. R.). Burlias, Nilghiris, Sept. y-e'.  $\beta \supseteq ad. sk$ . Hume Coll. Seegore, Feb. (W. Davison). f'. 3 ad. sk. Hume Coll. y', h'. ♂♀ad. Nellacotta, March (W. Hume Coll. sk. Davison). i'-m'.  $\beta \supseteq ad. et$ Mysore, July. Sept., & Nov. Hume Cell. imm. sk. n', o', p'.  $\mathcal{J}$  ad. Muddur, Mysore, July & Sept. W. Davison, Esq. [P.]. et imm. sk. q'. Ad. sk. Deccan (Sykes). India Museum [P.]. r', s'.  $\mathcal{F} \supseteq ad. sk$ . Khandala, March (S. B. Fair-Hume Coll. bank). t'-a". ♂ ♀ ad. Khandala, March & May (S. Tweeddale Coll. sk. B. Fairbank). b". Skeleton.

# 15. Palæornis calthropæ.

Palæornis calthrapæ, Layard, MS.; Blyth, J. A. S. B. xviii. p. 800 (1849), xix. p. 234 (1854); id. Cat. B. Mus. A. S. B. p. 340 n. 1833 (1849); Bp Rev. et Mag. de Zool. 1854, p. 152, n. 147; Sonancé, Rev. et Mag. de Zool. 1856, p. 208; Bp. Naumannia, 1856, Consp. Psitt. n. 145; Sonancé, Icon. Perr. pl. 45 (\$\frac{1}{2}\$\text{Q}\$) (1857); Blyth, Ibis, 1863, p. 4, 1866, p. 227, 1867, p. 294; Sonsa, Mus. Nac. Lisb. Psittaci, p. 15 (1869).

Palaeornis calthropae, Kelaart, Prodr. Cat. p. 127 (1852); Layard, Ann. & Mag. N. H. (2) xiii. p. 263 (1854); Hartl. Journ. f. Orn.

1854, p. 158, B. p. lxiii; G. R. Gr. List Psitt. Brit. Mus. p. 22 (1859); Schleg. Mus. P.-B. Psittaci, p. 83 (1864); Swinh. Ibis, 1864, p. 420; Finsch, Papag. ii. p. 53 (1868); G. R. Gr. Hand-list, ii. p. 142, n. 8057 (1870); Holdsw. P. Z. S. 1872, p. 426; Layard, P. Z. S. 1873, p. 204; Legge, Ibis, 1874, pp. 14, 24; p. 426; Layard, P. Z. S. 1873, p. 204; Legge, Ibis, 1874, pp. 14, 24; Holdsw. Ibis, 1874, p. 125; Hume, Str. Feath. ii. p. 18 (1874); Gould, B. of Asia, vi. pl. 1 (pt. xxvi., 1874); Wald. Ibis, 1874, p. 288; Schleg. Mus. P.-B. Psittaei, Revue, p. 36 (1874); Blyth, B. of Burma, p. 54 (note) (1875); Legge, Ibis, 1875, pp. 273, 411; id. Str. Feath. iii. p. 200 (1875); id. Ibis, 1876, p. 128; Gieb. Thes. Orn. iii. p. 7 (1877); Hume, Str. Feath. vii. p. 367 (1879), viii. p. 86, n. 151 bis (1879); Legge, B. of Ceyl. p. 177, pl. 6. ff. 1, 2 (1880); Tweedd. Orn. Works, pp. 280, 305 (1881); Rehnw. Vogelbild. t. xiii. f. 6 (1878–83); Tristr. Cat. Coll. B. p. 75 (1889); Oates, Nests & Eggs Ind. B. iii. p. 90 (1890). Pulæornis gironieri, Verr. Rev. et Mag. de Zool. 1853, p. 195; Cass. Journ. Acad. Philad. iii. p. 156 (1855); Wald. Trans. Zool. Soc.

Journ, Acad. Philad. iii. p. 156 (1855): Wald. Trans. Zool. Soc. ix. p. 138 (1875); Tweedd. Orn. Works, p. 305 (1881); Rehnw. Journ. f. Orn. 1881, p. 232 (Consp. Psitt. p. 127); id. Vogelbild.

Bericht. (1883).

Psittacus viridicollis, Cass. Pr. Acad. Philad. vi. p. 373 (1853); Bp. Compt. Rend. xliv. p. 539 (1857).

Palæornis viridicollis, Bp. Naumannia, 1856, Consp. Psitt. n. 144. Palæornis calthrapa, Bp. Compt. Rend. xliv. p. 539 (1857).

Palæornis calthropiæ, Schleg. Dierent. p. 72 (1864).

Adult male. Head, nape, and back bluish grey, lower back and upper tail-coverts more bluish; forehead, lores, region round the eyes, and fore part of the cheeks green; a broad collar and underparts bright green; under tail-coverts yellowish green; a very narrow bluish collar defines the grey head from the green collar; a broad mandibular black stripe extends on each side of the neck; scapulars greenish grey; wings green; smaller wing-coverts greyish blue, the median one yellowish green; under wing-coverts green; tail above blue, underneath yellowish; tip of the tail-feathers yellow; the inner web of all the lateral feathers washed and the outer webs finely edged with green: "iris yellow-white, or white, or greenish white, with a bluish-grey outer circle; cere dusky greenish; upper mandible coral-red, yellowish at the tip, lower dusky red; legs and feet dusky greenish, plumbeous green, or plumbeous" (Legge). Total length 11 to 12 inches, wing 5.6, tail 5.6 to 6.5, bill 0.85, tarsus 0.58.

Female. Very much like the male; bill dusky black; the green

on the face duller. Size a little smaller.

Young. Wants the black mandibular stripes, and all the grey or blue-grey colour on the head, which characterizes the adult bird, the whole head being green; the cap defined by an indistinct brighter green collar (Hume). The lower back and rump greyish blue, in very young birds green; middle tail-feathers blue; bill pale orange (Legge).

Hab. Ceylon.

Thwaites Coll. a, b, c. Ad. st. Ceylon. Mr. E. Boate [C.]. d. Ad. sk. Near Newara Ellia, Ceylon.

e. ♂ ad. sk. f, g. ♂ ♀ ad. sk. h-v. ♂ ♀ ad. sk. v. ♀ ad. sk. x-e'. ♂ ♀ ad. sk. f', g'. ♀ ad. sk. h'. Ad. sk.

Kandy, Ceylon.
Ceylon, Aug. & Sept.

Ceylon, Jan., April, March, &
Dec. (S. Chapman).
Ceylon, Dec. (Messrs. Hart).
Ceylon, Feb. & March (H.

Ceylon, Feb. & March (H. Nevill).
Ceylon, Feb. (H. Nevill).

Mr. A. White [C.]. W. V. Legge, Esq. [P.]. Tweeddale Coll.

Hume Coll. Tweeddale Coll.

Hume Coll. Gould Coll.

## 16. Palæornis derbyana.

Palaeornis derbyanus, Fraser, P. Z. S. 1850, p. 245, pl. 25; Gould, B. of Asia, vi. pl. 9 (pt. x., 1858); G. R. Gr. List Psitt. Brit. Mus. p. 25 (1859); Blyth, Ibis, 1866, p. 353, 1873, p. 79; Swinh. P. Z. S. 1873, p. 690 (Moupin); Hume, Str. Feath. ii. p. 9 (1874); Blyth, B. of Burma, p. 54 (note) (1875); Pavid et Oust. Ois. Chin. p. 1, pl. 1 (1877); Hume, Str. Feath. vii. p. 164 (1878); Rehuw. Journ. f. Orn. 1881, p. 240 (Consp. Psitt. p. 128).

Belurus pondicerianus, part., Souancé, Rev. et Mug. de Zool. 1856, p. 208.

Belocercus pondicerianus, part., Bp. Naumannia, 1856, Consp. Psitt. n. 147.

Palæornis vibrissa, part., Schleg. Mus. P.-B. Psittaei, p. 85 (1864).
Palæornis melanorhynchus, part., Finsch, Papag. ii. p. 70 (1868);
G. R. Gr. Hand-list, ii. p. 143, n. 8067 (1870); Wald. Ibis, 1873,
p. 227 (partim); id. in Blyth's B. of Burma, p. 55 (1875); Rehnw. (nec Wagl.) Vogelbild. in the text of pl. v. f. 4 (1878-83).

Type. Green; forehead, lores, and a broad moustache on the lower part of the cheeks velvety black; fore part of the crown and round the eyes verditer-green, rest of the crown and ear-coverts violet-blue; nape bright green; the remaining upper parts, the thighs, vent, and under tail-coverts green, more yellow on the centre of the wings; under tail-coverts narrowly edged with bluish; from the hinder part of the ear-coverts, down the side of the neek, runs a narrow line of a light rose-coloured purple or vinous, which colour extends over the whole under surface to the vent; under wing-coverts vinous like the underparts; tail above green, with the outer web of the lateral feathers slightly tinged with bluish, the central tail-feathers, and also the next pair, blue, broadly edged with green towards the base; the underside of the tail-feathers dull golden olive: "bill black; feet the usual Parrakeet colour; eyes pale straw-colour" (Fraser). Total length about 20 inches, wing 8.75, tail 10.5, bill 1.4, tarsus 0.7.

Adult male. Has the upper mandible red (David et Oustalet). Hab. Interior of China, on the Upper Yangtze? (David).

Thanks to the authorities of the Derby Museum in Liverpool, I have been able to examine the type specimen of this species. The much larger size distinguishes it at once from *P. fasciata*; there is not much difference in the nape, which is green in both species, only the green colour in *P. derbyana* extends higher up on the

occiput, whereas in both sexes of P. fasciata the occiput is uniform with the crown. The breast, as Mr. Hume notices, is, in P. derbyana, "much more of a lavender and much less of a vinaceous rosy than in P. melanorhyncha (=fasciata), the lavender or lilac in P. derbyana moreover extending considerably lower down towards the vent than does the vinaceous rosy in the other species." seems that nobody has noticed the very important difference in the colouring of the under wing-coverts, which are vinous in P. derbyana and green in P. fasciata.

I suspect that the type specimen is still unique, and that the bird mentioned by Père David and Oustalet, and figured in the 'Oiseaux de la Chine,' does not belong to this species; certainly the dimensions given by them do not agree with those of the type specimen.

#### 17. Palæornis fasciata.

Bracelet Parrakeet from East India, Albin, Orn. ii. p. 12, pl. 18 (1731).

Psittaca indica torquata, Briss. Orn. iv. p. 326 (1760) (ex Albin).

Psittacus alexandri, var.  $\beta$ , Linn. S. N. i. p. 142 (1766).

Parrucchetto con collana di capo e petto vinato, Gerini, Orn. ii. p. 19, tav. cxxvi. (1769).

Perruche de Pondichery, Daubent. Pl. Enl. 517.

Psittacus fasciatus, Müll. S. N. Suppl. p. 74, 6f (1776); Cass. Pr.

Ac. Nat. Sc. Philad. 1864, p. 239.

Perruche à moustaches, Buff. Hist. Nat. Ois. vi. p. 149 (1779).

Alexandrine Parrakeet, var. B, Purple-ringed Parrakeet, Lath. Syn. i. p. 236 (1781).

Mustachoed Parrakeet, Lath. Syn. i. p. 238 (1781).

Blossom-headed Parrakeet, var. B, Bornean Parrakeet, Lath. Syn. i. p. 240 (1781); id. Gen. Hist. ii. p. 165 (1822). Psittaeus vibrissa, Bodd. Tabl. Pl. Enl. p. 30 (1783).

Psittacus alexandri, var. y, Gm. S. N. i. p. 321 (1788); Lath. Ind.

Orn. i. p. 98 (1790).

Psittacus pondicherianus, Gm. S. N. i. p. 325, n. 73 (excl. var.) (1788); Lath. Ind. Orn. i. p. 99, n. 48 (excl. var. \( \text{p} \)) (1790); Bechst. Lath. Uebers. p. 76 (1811); Kuhl, Consp. Psitt. p. 33 (part.) (1820); Vieill. Enc. Méth. iii. p. 1390 (1823); Voigt, Cuv. Uebers. p. 733 (1831).

Psittacus borneus, Gm. S. N. i. p. 325 (1788).

Psittacus ginginianus, var.  $\gamma$ , Lath. Ind. Orn. i. p. 100 (1790).

Psittacus mystaceus, Shaw, Gen. Zool. viii. 2, p. 436 (nec pl. 63) (1811).

Psittacus pondicerianus, var. \( \beta \), Bechst. Lath. Uebers. p. 203 (1811). Rose-ringed Parrakeet, var. A, Lath. Gen. Hist. ii. p. 161 (1822).

Mustachoe Parrakeet, Lath. Gen. Hist. ii. p. 162 (1822).

Mustachoe Parrakeet, var. B, Lath. Gen. Hist. ii. p. 163 (1822). Pakeornis pondicerianus (part.), Vig. Zool. Journ. ii. p. 54 (1825);

Steph. Gen. Zool. xiv. 2, p. 128 (partim) (1826); Wagl. Mon.

Psitt. p. 512 (partim) (1832); Horsf. P. Z. S. 1839, p. 165;

McClell. P. Z. S. 1839, p. 165; Hodgs. Gray's Zool. Misc. p. 85 (1844); G. R. Gr. Gen. B. ii. p. 410, n. 12 (partim) (1846); id. Cat. Hodys. Coll. Brit. Mus. p. 113 (1846); Blyth, J. A. S. B. xv. p. 24 (1846), xvi. p. 745 (1847); id. Ann. & Mag. N. H. xx. p. 386 (1847); Brehm, Thierleb. iii. p. 70 (1865); Schmidt, P. Z. S. 1880, p. 310.

Conurus ponticerianus (part.), Less. Tr. d'Orn. p. 215 (1831).

Palæornis borneus, Wagl. Mon. Psitt. p. 510 (1832); Bp. Compt. Rend. xliv. p. 539 (1857); G. R. Gr. List Psitt. Brit. Mus. p. 24

(1859); id. Hand-list, ii. p. 143, n. 8070 (1870).

Palæornis melanorhynchus, Wagl. Mon. Psitt. p. 511 (1832); G. R. Gr. Gen. B. ii. p. 410, n. 11 (1846); Licht. Nomencl. Av. p. 72 (1854); Ep. Compt. Rend. xliv. p. 539 (1857); G. R. Gr. List Psitt. Brit. Mus. p. 24 (1859); Finsch, Papag. ii. p. 70 (1868); Tstil. Bris. Miss. p. 24 (1995), Pussek, Papag. H. p. 10 (1995);
G. R. Gr. Hand-list, ii. p. 143, n. 8067 (1870); Stölker, Journ. f.
Orn. 1872, p. 18; Wald. Ibis, 1873, p. 297 (Andamans), 1874,
p. 290; Blyth, B. of Burm. p. 57 (1875); Wald. ibid. p. 57 (note)
(1875); id. Ibis, 1875, p. 270 (var.); Armstr. Str. Feath. iv.
p. 308 (1876); Hume, Str. Feath. v. p. 21 (1876); Gieb. Thes. Orn.
iii. p. 10 (1877); Wardl. Rams. Ibis, 1877, p. 453; Hume & Davis.
Str. Feath. v. p. 20 (1878). Hume & F. Erick. Str. Feath, vi. p. 120 (1878); Hume, Str. F. viii, p. 165 (1878); Anders. Yunn, Exped. p. 568 (1878); Tweedd. Orn. Works, pp. 235, 281, 292 (1881); Salv. Cat. B. Strickl. Coll. p. 457 (1882).

Psittacus melanorhynchus, Sundev. Physiogr. Sällsk. Tidskr. 1837,

p. 176.

Psittacus nigrirostris, Hodgs. Gray's Zool. Misc. p. 85 (1844); Calc. Journ. of Nat. Hist. 1847, p. 560.

Palæornis mystaceus. Hodys. Gray's Zool. Misc. p. 85 (1844).

Palæornis barbatus (part.), Blyth, Cat. B. Mus. A. S. B. p. 6 (1849); id. Journ. A. S. B. xix. p. 233 (1850); Tytler, Ann. & Mag. N. H. (2) xiii. p. 365 (1854); Gould, P. Z. S. 1859, p. 151 (Siam). Belurus barbatus (part.), Bp. Rev. et Mag. de Zool. 1854, p. 152,

n. 150.

Belurus melanorhynchus, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 152. Belurus pondicerianus (part.), Souancé, Rev. et Mag. de Zool. 1856.

p. 208. Belocercus pondicerianus (part.), Bp. Naumannia, 1856, Consp.

Psitt. n. 147. Palæornis osbecki (part.), Horsf. & Moore, Cat. B. Mus. E. I. Co.

ii, p. 622 (1856–58). Palæornis vibrisca (sic), G. R. Gr. List Psitt. Brit. Mus. p. 24 (1859); G. R. Gr. Cat. Hodgs. Coll. Bril. Mus. p. 61 (1863); Schley. Mus. P.-B. Psittaci, p. 85 (1864); Sonsa, Mus. Nac. Lisb. Psittaci, p. 15 (1869); Blyth, Ibis, 1870, p. 163; Schley. Mus. P.-B. Psittaci, Revue, p. 36 (1874); Blyth, B. of Burm. p. 56 (1875).

Palæornis javanicus (part.), Jerd. B. of Ind. i. p. 262 (1863); Blyth, Ibis, 1863, p. 5 (part.); Schomb. Ibis, 1864, p. 264 (Siam); Blyth, Ibis, 1866, p. 353 (part.); Ball (nee Osbeck), J. A. S. B. xli. p. 279 (1872) (Andamans); id. Str. Feath. i. p. 60 (1873); Wald. Ibis,

1876, p. 343; Tweedd. Orn. Works, p. 427 (1881).

Palæornis sp., Swinh. Ibis, 1867, p. 389; Blanf. Ibis, 1870, p. 464. Palæornis lathami, Finsch, Papag. ii. p. 66 (1868); Swinh. Ibis, 1870, p. 230 (note); id. P. Z. S. 1871, p. 390; Gieb. Thes. Orn. iii. p. 9 (1877).

Palæornis javanica, Swinh. (nec Osbeck) Ibis, 1870, p. 93.

Palæornis fasciatus, G. R. Gr. Hand-list, ii. p. 143, n. 8066 (1870); Hume, Nests & Eggs, p. 118 (1873); id. Str. Feath. ii. pp. 9, 20, 526 (1874), iii. p. 264 (1875), vii. p. 164 (1878), viii. pp. 51, 87, n. 152 (1879); Sclat. P. Z. S. 1879, p. 300; Scully, Str. Feath. viii. p. 243 (1879); Bingh. Str. Feath. ix. p. 160 (1880); Rehnw. Vogelbild, t. v. f. 4 (3), t. xiii. f. 7 (2) (1878-83); id. Journ. f. Orn. 1881, p. 241 (Consp. Psitt. p. 129); Oates, Str. Feath, x, p. 190 VOL. XX.

(1882); id. B. of Brit. Burm. ii. p. 143 (1883); Hume, Str. Feath. xi. p. 55 (1888); Tristr. Cat. Coll. B. p. 75 (1889); Mwr. Avif. of Brit. Ind. ii. p. 464 (1890); Oates, Nests & Eggs and. B. iii. p. 90 (1890).

Palæornis melanorhyncha, Sclat. P. Z. S. 1871, p. 771; Blyth, Ibis, 1873, p. 79; Sclat. P. Z. S. 1878, p. 999.

Palæornis ponticerianus, Blyth, Ibis, 1873, p. 79.

Palæornis schisticeps, Sclat. (nec Hodgs.) P. Z. S. 1876, p. 696.

Palæornis fasciata, Salvad. Ann. Mus. Civ. Gen. (2) iv. p. 574 (1887), v. p. 559 (1888), vii. p. 376 (1889).

Adult male. Green; a large yellowish-green patch on the median wing-coverts; head grey, with a slight tinge of bluish; lores and round the eyes tinged with greenish; a band from the forehead to the eyes and broad mandibular stripes black; a collar on the nape to the sides of the neck emerald-green; throat, breast, and upper abdomen vinaceous red: lower abdomen, vent, and under tail-coverts green, washed with blue; middle tail-feathers blue, edged with green near the base and tipped yellowish, the others bluish green; tail underneath dull golden yellow: upper mandible coralred, the tip yellow; lower mandible black; iris light yellow; legs dusky greenish yellow. Total length 14 to 16 inches, wing 6.8, tail 7.5 to 9, bill 1.02, tarsus 0.54.

Female. Differs in having the head tinged with blue, and the vinaceous red of the breast produced up the sides of the neek between the lilac-blue of the head and the emerald-green of the neck; bill

black, with the base of the lower mandible orange-brown.

Young. Green; no vinaceous red on the lower plumage; forehead and sides of the head more or less greyish; broad mandibular stripes blackish; a yellowish patch on the wing-coverts as in the adult; bill black.

Hab. Eastern Bengal and along the Himalayas as far as Kumaon, Indo-Burmese Regions, Andaman Islands, Cambodia, Cochin China, Hainan, and, according to Swinhoe, also south of China, near Amoy.

a. Ad. sk.	India.	Hon, E. India Co.
<ul><li>b. ♀ ad. sk.</li><li>c. Ad. st.</li></ul>	Kumaon. Nepal.	Hume Coll. B. H. Hodgson, Esq.
d−i. Ad. et imm. sk.	Nepal.	[P.]. B. H. Hodgson, Esq.
k, l, m. Ad. sk.	Nepal (B. H. Hodgson).	India Museum.
n. 3 ad. sk.	Nepal Valley, August (J. Scully).	Hume Coll.
o-s. ♂♀ ad. et imm. sk.	Sikhim, Jan., April, Dec. (L. Mandelli).	Hume Coll.
t, u, v. Ad. et imm. sk.	Sikhim Terai, Dec. (L. M.).	Hume Coll.
w. Ad. sk.	Lower Hills, Sikhim, Dec. (L. M.).	Hume Coll.
$x, y, z$ . $\emptyset$ ad. et $\mathbb{Q}$ imm. sk.	Mongphoo, N. Darjeeling.	Hume Coll.
a'-e'. Ad. sk.	Bhotan Doars, Jan., April (L. M.).	Hume Coll.

f', g'. Ad. sk. $h'$ . $Q$ ad. sk.	Tipperah. N. Khasia Hills, March (A.	Hume Coll. Tweeddale Coll.
i', k'. Ad. sk. l'. ♂ ad. sk. m'. ♂ ad. sk. n', o'. ♂ ♀ ad.	W. Chennell). Assam (A. W. C.). Assam, April (J. Cockburn). Suddya, Assam, June (J. C.). Dollah, Assam, April, May	Tweeddale Coll. Hume Coll. Hume Coll. Hume Coll.
sk. $p'-v'$ . $\mathcal{F} \ $ ad. et	(J. C.). Dibrughur, Feb. & June (J.	Hume Coll.
imm. sk. w'. Ad. sk. x'. Ad. sk. y', $z'$ , $a''$ . $d$ ad.	R. Cripps). Cachar, Feb. (A. O. H.). Cachar (J. Inglis). Mauipur, April (A. O. H.).	Hume Coll. Hume Coll. Hume Coll.
sk. b''-e''. ♂♀ad. et imm. sk.	Syriam, Jan., Dec. (J. Arm- strong).	Hume Coll.
et imm, sk, f''. of ad. sk, g''. of ad. sk, h''. of ad. sk, i''. Ad. sk, k''. of ad. sk.	Borongho, March (J. A.). Parrot Creek, Feb. (J. A.). Thayetmyo. Thayetmyo. E. Pegu Hills, April (E. W.	Hume Coll. Hume Coll. Hume Coll. Tweeddale Coll. Hume Coll.
l'', m'', n''. ♂ ad. et imm. sk. o''. Ad. sk.	Oates).  Kyeikpadein, Pegu, June, Sept. Bassein, Pegu.	E. W. Oates, Esq. [C.]. W. T. Blanford, Esq.
p", q", r". Ad. et imm. sk.	Lower Pegu.	[P.]. E. W. Oates, Esq [C.].
s''. ♂ ad. sk. t''. ♂ ad. sk.	Rangoon, Oct. (R. G. W. R.). H-touk-yan, Brit. Burmah, Dec. (R. G. W. R.).	Tweeddale Coll. Tweeddale Coll.
u". Ad. sk.	Dec. (R. G. W. R.). Yatho, Brit. Burmah (R. G. W. R.).	Tweeddale Coll.
$v''$ . $Q$ ad. sk. $w''-d^3$ . $Q$ $Q$ ad. et imm sk.	Upper Burmah, Jan. Tonghoo, April, Dec. (R. G. W. R.).	Dr. J. Anderson [P.] Tweeddale Coll.
$e^3-o^3$ . $o$ $Q$ ad. et imm. sk.	Pahpoon, Salween Distr., Jan. Feb., Dec. (W. Davison).	Hume Coll.
$p^3$ , $q^3$ . $Q$ ad. et imm. sk.	Salween Distr., Dec. (W. D.).	Hume Coll.
r³-u³. ♂ ad. sk.	Thatone, Jan., Feb., Dec. (W. D.).	Hume Coll.
$v^3-y^3$ . $\mathcal{F} Q$ ad. sk.	Thamban, Jan., Nov. (W. D.).	Hume Coll.
$z^3$ . $Q$ ad. sk. $a^4-d^4$ . $Q$ $Q$ ad.	Wimpong, Dec. (W. D.). Moulmein, March (W. D.).	Hume Coll. Hume Coll.
sk. $e^4$ . $\eth$ ad. sk. $f^4$ . $\eth$ ad. sk. $g^4$ , $h^4$ . $\eth$ $Q$ ad. sk. sk.	Myawadu, Jan. (W. D.). Near Meetan, Feb. (W. D.). Amherst, Dec. (W. D.).	Hume Coll. Hume Coll. Hume Coll.
$i^4$ , $k^4$ . $\mathcal{J} \ $ ad.	Pymima-bin, Jan. ( $W.\ D.$ ).	Hume Coll.
sk.  l <sup>1</sup> , m <sup>4</sup> . d ad. sk.  n <sup>4</sup> , o <sup>4</sup> , p <sup>4</sup> . d Q ad.  sk.	Yeaboo, March, Dec. (W. D.). Mergui, Nov. (W. D.).	Hume Coll. Hume Coll.
q⁴. ♂ ad. sk.	Attaran Distr., March ( $W.D.$ ).	Hume Coll. 2 п 2

1<sup>-4</sup>. ♀ ad. sk. Tavoy River, Jan. (J. Dar-Hume Coll. ling). Tavoy, March, April, June (W. Davison).  $s^4-w^4$ .  $\mathcal{J} \supseteq ad$ . Hume Coll. et imm. sk.  $x^1$ . Q ad. sk. Shymootee, Tavoy, May Hume Coll. (W. D.). Meeta Myo, Tavoy, April Hume Coll.  $y^4-c^5$ .  $\mathcal{J}$  ad. et imm, sk. (W.D.).d⁵. ♂ ad. sk, Malawoon, May (W. D.). Hume Coll.  $e^5$ ,  $f^5$ .  $\delta$  ad. et  $\varphi$  imm. sk. S. Andamans, Nov. (R. J. Hume Coll. Wimberley). g5-s5. 3 ♀ ad. S. Andamans, Jan.-Dec. (R. Tweeddale Coll. et imm. sk. J. W.).  $t^5$ . Q ad. sk. S. Andamans, Feb., Nov. R. B. Sharpe, Esq. [P.].  $u^5-z^5$ .  $\mathcal{F} \cap \mathcal{F}$  ad. Mt. Harriet, S. Andamans, Dec. Hume Coll. (W. Davison). sk. Port Mouat, S. Andamans, Hume Coll. a6. ♂ ad. sk. April (W. D.). 6. Ad. sk. Port Blair, S. Andamans. Hume Coll. Aberdeen, S. Andamans, April c6. ♀ ad. sk. Hume Coll. (W, D.).Macpherson's Strait, March d<sup>6</sup>. ♂ ad. sk. Hume Coll. (W, D.). $e^6$ ,  $f^6$ . Ad. sk. [Nicobars.] Tweeddale Coll. g<sup>6</sup>. Ad. sk.
 h<sup>6</sup>. Ad. sk. [Java] (Horsfield). Siam (Finlayson). India Museum [P.] India Museum P.J. i<sup>6</sup>. Ad. sk. Siam. Purchased.  $k^6-p^6$ . Ad. et Saigon, Cochin China, July, M. E. Pierre  $\lceil P. \rceil$ . imm. sk. Oct. q6. Ad. sk. Cambodia. Tweeddale Coll. r6. Ad. sk.. Hainan (R. Swinhoe). Purchased. s<sup>6</sup>. ♂ ad. sk. Hainan, March (R. S.). H. Seebohm, Esq. [P.]. t<sup>6</sup>. Juv. sk. Amoy, China, Nov. (R. S.). H. Seebohm, Esq. [P.].

#### 18. Palæornis alexandri.

Psittacus alexandri, Odhel, in Linné's Aman. Acad. iv. p. 236 (1754); Linn. Mus. Ad. Friedr. ii. p. 14 (1764); id. S. N. i. p. 141, n. 14 (partim) (1766); Gm. S. N. i. p. 321, n. 14 (partim) (1788); Vieill. Enc. Méth, iii. p. 1388 (partim) (1823).

Psittacus javanicus, Osb. It. Ind. Orn. i. p. 101 (1757); id. Forster,

English edit. i. p. 156 (1771).

Alexandrine Parrakeet, var. E, Javan Parrakeet, Lath. Syn. i. p. 237

Psittacus bimaculatus, Sparrm. Mus. Carls. i. t. 30 (young) (1787); Lath. Ind. Orn. i. p. 99, n. 49 (1790); Shaw, Gen. Zool. viii. 2, p. 457 (1811); Bechst. Stubenvög. p. 610 (1794); id. Kurze Uebers. p. 76 (1811); Vieill. N. D. xxv. p. 345 (1817); id. Enc. Méth. iii. p. 1385 (1823).

Psittacus alexandri, var. *Z*, *Gm. S. N.* i. p. 321 (1788).
Psittacus osbeckii, *Lath. Ind. Orn.* i. p. 87, n. 16 (1790); *Bechst. Kurze Uebers.* p. 75 (1812); *Horsf. Trans. Linn. Soc.* xiii. p. 182 (1821); *Oken's Isis*, 1825, p. 1028.

La Perruche à poitrine rose, Levaill. Perr. pl. 31 (1801).

Javan Parrakeet, Shaw, Gen. Zool. viii. 2, p. 426 (1811); Lath. Gen. Hist. ii. p. 122 (1822).

Mustachoe Parrakeet, Shaw, Gen. Zool. viii. 2, pl. 63 (ex Levail-

lant, but not the text) (1811).

Psittacus pondicerianus (part.), Kuhl, Consp. Psitt. p. 33 (1820) Hahn, Orn. Atlas, Papag. p. 16, t. 5 (1834); Dubois, Orn. Gal. pl. 71 (1839) (ex Hahn); Müll. et Schleg. Verhand. Land- en Volkenk. p. 108 (1839-44).

Whiskered Parrakeet, Lath. Gen. Hist. ii. p. 63 (1822) (young).

Palæornis pondicerianus (part.), Vig. Zool. Journ. ii. p. 54 (1825); Steph. Gen. Zool. xiv. 2, p. 128 (partim) (1826); Sw. Zool. Ill. 2nd ser. i. pl. 16 (1829); Wagl. Mon. Psitt. p. 512 (partim) (1832); G. R. Gr. Gen. B. ii. p. 410, n. 12 (partim) (1846); Bernst. Journ. f. Orn. 1859, p. 187; Rosenb. Journ. f. Orn. 1862, p. 60; id. Nat. Tijdschr. Ned. Ind. xxv. p. 139 (1863); Pelz. Novara Reis., Vög. p. 97 (1865).

Psittacus trimaculatus (errore), Steph. Gen. Zool. xiv. 2, p. 128

(1826).

Psittacus pondicerianus, Vig. Mem. of the Life of Raffles, p. 666 (1830).

Conurus ponticerianus (part.), Less. Tr. d'Orn. p. 215 (1831).

Psittacus (Belocercus) pondicerianus, Müll. et Schleg. (nec Gm.) Verhand. Land- en Volkenk. p. 107 (1839-44).

Palæornis ponticerianus, Hartl. Syst. Verz. Ges. Mus. p. 84 (1844). Belurus barbatus (part.), Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 150; Sousa, Mus. Nac. Lisboa, Psittaci, p. 15 (1869).

Belurus pondicerianus (part.), Souancé, Rev. et Mag. de Zool. 1856,

p. 208.

Belocercus pondicerianus (part.), Bp. Naumannia, 1856, Consp. Psitt. n. 147.

Palæornis osbecki (partim), Horsf. & Moore, Cat. B. Mus. E. I. Comp. ii. p. 622 (1856-58).

Palæornis javanicus, G. R. Gr. List Psitt. Brit. Mus. p. 24 (1859); Sclat. P. Z. S. 1863, p. 208, n. 13; Wall, P. Z. S. 1864, pp. 282, 293; Schleg. Mus. P.-B. Psittaci, p. 86 (1864); Blyth, Ibis, 1866, p. 353 (partim), 1870, p. 163; Schleg. op. cit. Revue, p. 36 (1874); Sclat. P. Z. S. 1876, p. 301; Nichols. Ibis, 1879, p. 165; Vorderm. Nat. Tijdschr. Ned. Ind. xlii. p. 198 (1882); Sclat. List Vert. An. 8th ed. p. 322 (1883); Vorderm. Nat. Tijdschr. Ned. Ind. xlv. p. 317 (1885); Tristr. Cat. Coll. B. p. 75 (Borneo) (1889). Palæornis javanica, Sclat. P. Z. S. 1859, p. 436; Salvad. Ucc. Born.

Palæornis javanica, Sclat. P. Z. S. 1859, p. 436; Salvad. Ucc. Born. p. 25 (1874); ? Rosenb. Malay. Archip. p. 220 (Nias) (1878); Blas. Ver. f. Naturw. zu Braunschweig, iii. Jahresb. p. 87 (1883); Vorderm. Nat. Tijdschr. Ned. Ind. xlvi. p. 70 (West Java), p. 224 (1886); Everett, Journ. St. Br. of the Roy. As. Soc. 1889, p. 177.

Palæornis vibrisca (part.), Finsch, Ned. Tijdschr. Dierk. i. Berigt.

p. ix (1863).

Palæornis alexandri, Finsch, Papag. ii. p. 59 (syn. emend.) (1868);
Hume, Str. Feath. ii. p. 19 (1874); Wald. Ibis, 1873, p. 297, 1874,
p. 290; Gieb. Thes. Orn. iii. p. 7 (1877) (syn. emend.); Tweedd. Orn. Works, pp. 236, 281 (1881); Rehnw. Jowrn. f. Orn. 1881,
p. 241 (Consp. Psitt. p. 129); id. Vogelbild. t. v. f. 3 (1878-83);
Oates, B. of Brit. Burm. ii. p. 144 (1883).

Belocercus javanicus, G. R. Gr. Hand-list, ii. p. 143, n. 8068

(1870).

Very much like *P. fasciata*, only a little smaller, and with the bill wholly red both in the male and female.

Male. Total length  $13 \cdot 5$  inches, wing  $6 \cdot 1$ , tail  $6 \cdot 5$ , bill 1, tarsus  $0 \cdot 54$ .

Hab. Java and Southern Borneo.

I have never seen a specimen of this Parrot from Borneo, where most likely it has been introduced in the southern part.

a. Ad. st.
b. Ad. st.
c. ♂ ad. sk.
d, e. ♂ ♀ ad. sk.
f. Ad. sk.
g, h. Imm. sk.
i, k. Skeletons.

[India]. Indian Archipelago. East Java. Java (*Leyden Museum*). West Java. Java. J. Inskipp [P.]. Sir E. Belcher [P.]. A. R. Wallace [C.]. Salvin-Godman Coll. F. Nicholson [P.]. Tweeddale Coll.

## 19. Palæornis caniceps.

Palæornis caniceps, Blyth, J. A. S. B. xv. pp. 23, 51, 368 (1846); id. Cat. B. Mus. A. S. B. p. 6 (1849); id. J. A. S. B. xix. p. 233 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 146; Hartl. Journ. f. Orn. 1854, B. p. lxiii; Horsf. & Moore, Cat. B. Mus. E. I. Comp. p. 621 (1856-58); Gould, B. of Asia, vi. pl. 5 (pt. ix. 1857); Moore, P. Z. S. 1859, p. 454; G. R. Gr. List Psitt. Brit. Mus. p. 25 (1859); Jerd. B. of Ind. i. p. 264 (1862); Blyth, Ibis, 1863, p. 5; Wall. P. Z. S. 1864, pp. 282, 292; Pelz. Novara Reis., Vög. p. 98 (1865); Finsch, Papag. ii. p. 83 (1868); Blyth, Ibis, 1873, p. 80 (note); Ball, Str. Feath. i. p. 61 (1873); Hume, Str. Feath. ii. pp. 25, 178 (1874); Wald. Ibis, 1874, p. 296; Blyth, B. of Burm. p. 56 (note) (1875); Gieb. Thes. Orn. iii. p. 7 (1877); Hume, Str. Feath. viii. pp. 51, 87, n. 151 ter (1878); Rehnw. Vogelbild. t. xiii. f. 1 (1878-83); id. Journ. f. Orn. 1881, p. 240 (Consp. Psitt. p. 128); Tweedd. Orn. Works, p. 285 (1881).

Belurus caniceps, Souancé, Rev. et Mag. de Zool. 1856, p. 209. Belocereus caniceps, Bp. Naumannia, 1856, Consp. Psitt. n. 149; G. R. Gr. Hand-list, ii. p. 143, n. 8069 (1870).

Palæornis canicollis (errore), Rehnw. Journ. f. Orn. 1881, p. 234 (Consp. Psitt. p. 122.).

Adult male. Green, brighter on the rump and upper tail-coverts; head grey; the grey nape passing gradually into the green back; a broad black band from the forehead to the eyes; chin and broad mandibular stripes also black; primaries and their coverts black, washed with green on the outer web, and narrowly edged with blue towards the base of the outer web; tail green above, dull golden beneath; middle tail-feathers greyish towards the tip, and in some specimens slightly tinged with bluish at the base, tip greenish: iris orange-red; upper mandible red, lower black; feet plumbeous-green. Total length 22 inches, wing 8·8, tail 14, bill 1·15, tarsus 0·7.

Female. The grey colour of the pileum and nape tinged with bluish; the bill wholly black.

Hab. Confined to the Nicobar Islands.

a. Ad. sk. [Pinang.] India Museum [P.]. b, c.  $\circlearrowleft$  ad. sk. [Pinang.] Great Nicobars, April, Nov. Hume Coll. (A. de Roepstorff). d-g.  $\beta \supseteq ad$ . sk. Montshall, Nicobars, March Hume Coll. (W. Davison). Kondel, Nicobars, March (W.D.). h-s.  $\mathcal{J} \ Q$  ad. sk. Hume Coll. t. ♀ ad. sk. Kondel, Nicobars, July (A. de Hume Coll. Roepstorff).Kondel, Nicobars, March (W.D.). Little Nicobar, April (A. de u, v. ♂ ♀ ad. sk. Tweeddale Coll. w. 3 ad. sk. Hume Coll. Roepstorff).

#### 20. Palæornis modesta \*.

Palæornis melanorhynchus, Hartl. (nec Wagl.) Syst. Verz. Ges.

Mus. p. 84 (1844) (fide Finsch, MS.).

Palæornis modestus, Fras. P. Z. S. 1845, p. 16 (Q); G. R. Gr. Gen. B. ii. p. 410, n. 13 (1846); Fraser, Zool. Typ. pl. 54 (1849); Blyth. *Ibis*, 1865, p. 42.

Palæornis lucianæ, Verr. Rev. et May. de Zool. Nov. 1850, p. 598,

pl. 13 (♂ ad.).

Palæornis erythrogenys, Fraser (nec auct.), P. Z. S. 1850 (Nov. 11), p. 245, pl. xxvi. (ad.).

Belurus luciani, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 151.

Belurus barbatus, part., Souuncé, Rev. et Mag. de Zool. 1856, p. 209.

Belurus modestus, Souancé, ibid. (young).

Belocercus barbatus, part., Bp. Naumannia, 1856, Consp. Psitt. n. 148.

Belocercus modestus, Bp. ibid. n. 150.

Palæornis fraseri, Moore, Cat. B. Mus. E. I. Comp. ii. p. 621 (note)

(1856–58).

Palæornis luciani, Gould, B. of Asia, vi. pl. 4 (pt. ix., 1857); G. R. Gr. List Psitt. Brit. Mus. p. 23 (1859); Schley. Dierent. fig. p. 72 (1864); id. Mus. P.-B. Psittaci, p. 84 (Sumatra?) (1864); Finsch, (1864), at. Mas. F.-B. Ishtel, p. 34 (Simatra!) (1864); Fussch, Papag. ii. p. 56 (1868); Hume, Str. Feath. ii. p. 19 (1874); Schleg. Mus. P.-B. Psittaci, Revue, p. 36 (1874); Wald. Blyth's B. of Burmah, p. 55 (1875); Gieb. Thes. Orn. iii. p. 10 (1877); David et Oust. Ois. Chine, p. 2 (1877) (S.W. China); Rehnw. Journ. f. Orn. 1881, p. 241 (Consp. Psitt. p. 130); id. Vogelbild. Nachtr. 60 (1883); Sclat. List Vert. An. 8th ed. p. 322 (1883); Verdery, Nat. Tiilbehr. Nat. Int. 1 in. 209 (1881).

Vorderm. Nat. Tijdschr. Ned. Ind. li. p. 209 (1891). Belocercus luciani, G. R. Gr. Hand-list, ii. p. 143, n. 8064 (1870). Palæornis barbatus, Blyth (nec. Gm.?), B. of Burmah, p. 54 (1875)

(Western China).

Adult male. Green, forehead dark bluish green, passing to green

Mustacho Parrakeet, var. A, Bearded Parrakeet, Lath. Syn. i. p. 238 (1781); id. Gen. Hist. ii. p. 163 (1822). Psittacus barbatus, Gm. S. N. i. p. 325 (1788).

Psittacus pondicerianus, var. β, Lath. Ind. Orn. i. p. 99 (1790). Palæornis pondicerianus, part., Vigors, Zool. Journ. ii. p. 54 (1825).

Conurus erythrogenys, Less. Tr. d'Orn. p. 215 (1831). Palæornis barbatus, Wagl. Mon. Psitt. p. 514 (1832); G. R. Gr. Gen. B. ii. p. 410, n. 14 (1846); Blyth, Cat. B. Mus. A. S. B. p. 6 (partim) (1849).

Belocercus barbatus, G. R. Gr. List Psitt. Brit. Mus. p. 23 (1859); id. Hand-list, ii. p. 143, n. 8072 (1870).

<sup>\*</sup> The following quotations may also refer to this species:—

on the sinciput; crown dull reddish with a greenish tinge, occiput and nape brighter reddish; loral bands and broad mandibular stripes black; cheeks and ear-coverts bright brick-red; upper back pale yellowish green, more or less washed with bluish; lower back green tinged with bluish; uropygium and upper tail-coverts bright green; fore neck and upper breast pale yellowish green, passing into bright green on the lower breast, abdomen, under tail-coverts, and smaller and median under wing-coverts; wings green; inner webs and under surface of quills and greater under wing-coverts dark blackish; central tail-feathers green, changing into blue towards the apical half, and slightly tinged with green at the tip, the other tail-feathers green; tail underneath dull golden olive: "iris yellow; upper mandible red with the tip whitish, under mandible black; feet grey" (Modigliani). Total length about 15.5 inches, wing 8.25, tail 9, bill 1.25, tarsus 0.7.

Female. Green, lighter underneath; pileum greenish brown; frontal edge, lores, and mandibular stripes dark bluish green, almost black; cheeks and ear-coverts reddish, the last edged behind with a bluish band; tail above green, apical part of the central feathers blue, with the tip greenish; tail underneath dull golden olive: bill black. Total length 13 inches, wing 7.6, tail 6.75, bill 1.2, tarsus 0.7.

Hab. Engano, off the west coast of Sumatra. Dr. E. Modigliani has quite recently discovered the habitat, previously unknown, of this bird; the two living specimens mentioned (l. c.) by Dr. Vorderman, as from Lampong (S. E. Sumatra), no doubt were from Engano.

A very large male specimen, kept in confinement, now in the British Museum (specim. a), has the following dimensions:—Total length 19 inches, wing 8, tail 11·3, bill 1·15, tarsus 0·65.

Zoological Society [P.]. Zoological Society [P.]. (Type of species.) Gould Coll.

Dr. E. Modigliani [C.].

d. ♀ ad. sk. e, f. ♂♀ ad. sk.

Engano, May 1891.

## 21. Palæornis nicobarica.

Paleornis erythrogenys, Blyth (nec Lesson, neque Bourjot), J. A. S. B. xv. pp. 23, 51, 369 (1846): id. Cat. B. Mus. A. S. B. p. 6 (1849): id. J. A. S. B. xix. p. 233 (1850); Horsf. & Moore, Cat. B. Mus. E. I. Comp. ii. p. 620 (1856-58); Blyth, J. A. S. B. xxvii. p. 81 (1858); G. R. Gr. List Psitt. Brit. Mus. p. 23 (1859); Blyth, Ibis, 1863, pp. 5, 465 (partim), 1868, p. 132; Finsch, Papag. ii. p. 81 (partim) (1868); Ball, J. A. S. B. xxxix. p. 30 (partim) (1870); id. Str. Feath. i. p. 601 (partim) (1873); P. Blyth, Ibis, 1873, p. 80 (note); Hume, Str. Feath. ii. pp. 23, 181 (1874); Garrod, P. Z. S. 1874, p. 587; Blyth, B. of Burm. p. 54 (note) (partim) (1875); Wald. ibid. p. 55 (note) (1875); Gieb. Thes. Orn. iii. p. 8 (1877); Rehwv. Vogelbild. t. xiii. f. 2 (1878-83); id. Journ. f. Orn. 1881, p. 242 (Consp. Psitt. p. 130) (partim); Selat. List Vert. An. 8th ed. p. 323 (1883).
Belurus erythrogenys, Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 149.

Belurus barbatus, part., Souancé, Rev. et Mag. de Zool. 1856, p. 209. Belocercus barbatus, part., Ep. Naumannia, 1856, Consp. Psitt. n. 148.

Pala crnis nicobaricus, Gould, B. of Asia, vi. pl. 6 (pt. ix., 1857); Pelz. Novara Reis., Vöy. p. 97 (1865); Hume, Str. Feath. viii. p. 87, n. 152 bis (1879); Oates, Nests & Eygs Ind. B. iii. p. 91 (1890).

Belocercus erythrogenys, part., G. R. Gr. Hand-list, ii. p. 143,

n. 8065 (1870).

Adult male. Green: lores bluish black; pileum green; cheeks and ear-coverts brick-red; broad mandibular stripes black; nape pale vellowish green, below the occiput slightly washed with lilac; interscapular region pale green washed with bluish; uropygium and upper tail-coverts green; fore neck and upper breast yellowish green; abdomen and under tail-coverts brighter green; wings green, quills blue edged with green and washed with green towards the tips; primary-coverts blue; under wing-coverts of the same green as the abdomen; middle tail-feathers blue edged with green, the others green, more or less blue along the middle; tail underneath golden oily-yellow: "upper mandible vermilion-red, yellow at the tip, lower mandible in some specimens horny black, in some yellowish horny, and in some dusky dingy red; irides in some specimens bright yellow, in some pale yellow, in some creamy white, and in some pale brown: orbital skin greenish brown or brownish green; legs and feet dull earthy or brownish green" (Hume). Total length 18 to 20 inches, wing 7.4 to 7.7, tail from vent 10.25 to 11.75, bill from nostrils to point 0.96 to 1.04, tarsus 0.5 to 0.7.

Adult female. Green; the pileum has a slight tinge of olive; no light greyish glaucous tinge on the nape and interscapular region, which are green; the red colour of the cheeks duller than in the male; mandibular stripes black, slightly tinged with green; both mandibles blackish. Total length 15 to 16.5 inches, wing 7.3 to 7.5, tail from vent 8.25 to 9.25.

Young. Resembles the female, but both mandibles are dull red in very young birds.

Hab. Nicobar Islands.

a. Ad. sk.	Nicobar.	India Museum [P.].
<i>b-f.</i> Ad. sk.	(Type of Palæornis Nicobar.	erythrogenys, Blyth.) Tweeddale Coll.
$y$ - $l$ . $\delta \circ \alpha$ ad. sk.	Kondul, Nicobars, March (W. Davison).	
$m$ . $\mathcal{J}$ ad. sk.	Montshall Is., Nicobars, March (W. Davison).	Hume Coll.
n. $d$ ad. $sk$ .	Trinkut, Nicobars, Jan.	E. W. Oates, Esq.
o-r. ♂♀ ad. et imm. sk.	Trinkut, Nicobars, Jan., March (W. Davison).	[C.]. Hume Coll.
s, t. o ad. sk.	Trinkut, Nicobars, Dec. (R. J. Wimberley).	Tweeddale Coll.
$u, v, w$ . $\delta$ ad. sk.	Teressa, Nicobars, Jan. (W. Davison).	Hume Coll.

Hume Coll. *x*, *y*. *d* ad. sk. Pilu Milu, Nicobars, Jan. (W. Davison). z, a', b'.  $\beta \circ ad$ . Car, Nicobars, Jan., March (W. Hume Coll. Davison). Camorta, Nicobars, Dec. (R. c'. 3 ad. sk. Tweeddale Coll. J. Wimberley). d'-n'.  $\partial Q$  ad. sk. Camorta, Nicobars, Jan., Feb. Hume Coll. (W. Davison). o'. & ad. sk. Great Nicobar, April (A. de Hume Coll. Roepstorff). p'. Q ad. sk. Little Nicobar (A. de Roep-Hume Coll. storff).

### 22. Palæornis tytleri.

Palæornis erythrogenys, Blyth, Ibis, 1860, p. 99, 1863, pp. 5, 465 (nec Blyth, 1846); id. iv Mouat's Adv. & Res. Andam. Isl. p. 355 (1863); Beav. Ibis, 1867, p. 319 (Andamans); Blyth, Ibis, 1868, p. 132; Finsch, Papay. ii. p. 81 (partim) (1868); Ball, J. A. S. B. xli. p. 279 (1872); id. Str. Feath. i. p. 60 (partim) (1873); Blyth. His, 1873, p. 79 (note); Wald. Ibis, 1873, p. 298; id. in Blyths
B. of Burma, p. 55 (1875); Rehnw. Journ. f. Orn. 1881, p. 242
(Consp. Psitt. p. 130) (partim).

Palæornis nicobaricus, Wald. (nec Gould) P. Z. S. 1866, p. 555
(Andamans); Newt. Ibis, 1867, p. 319 (note); Ball, J. A. S. B.
xxxix. p. 241 (1871).

Palæornis erythropygius (errore), Blyth, Ibis, 1866, p. 221.

Paleornis affinis, Tytler (nee Gould), M.S.; Beav. Ibis, 1867, pp. 320, 334 (Ω, Andamans); Blyth, Ibis, 1868, p. 132; Hume, Str. Feath. ii. pp. 9, 24, 184 (1874); Wald. Ibis, 1874, p. 296.

Belocercus erythrogenys, part., G. R. Gr. Hand-list, ii. p. 143.

n. 8065 (1890).

Palæornis tytleri, Hume, J. A. S. B. 1874, p. 108; id. Str. Feath. ii. p. 454 (1874), viii. p. 87, n. 152 ter (1879); Tristr. Cat. Coll. B. p. 75 (1889).

Adult male. Resembles the male of P. nicobarica, but it is somewhat smaller, and has the nape and upper back less yellowish and more strongly suffused with lilac and glaucous tinge; the same tinge, but lighter, appears on the breast, which is less yellowish. Total length 15.5 to 18.25 inches, wing 6.7 to 7.2, tail from vent 9 to 10.5, bill from nostrils to point 0.87 to 0.95, tarsus 0.5 to 0.6.

Adult female. Very much like the female of P. nicobarica, only smaller and with the entire mandibular stripes deep green. Total length 15.5 to 15 inches, wing 6.4 to 6.95, tail from vent 6.55 to 8.

Young has very little red on the cheeks.

Hab. The whole Andaman group, including Narcondam and Barren Island, the Cocos and Preparis.

a. ♂ ad. sk. Gt. Coco Is., March (W. Davi-Hume Coll. b. ♂ ad. sk. Coco Is., April (R. G. W. R.). Tweeddale Coll. c. ♀ ad. sk. Table Is., Gt. Coco, March Hume Coll. (W. Davison).  $d, e, f. \ \exists \ Q \text{ ad.}$  sk. Little Coco Is., March (W. Hume Coll. Davison).

 $g. \ \$ ad. sk. Little Coco Is., March. E. W. Oates, Esq. E. W. Oates, Esq. h. 3 ad. sk. Preparis Island, March. [C.]. Hume Coll. i. ♀ ad. sk. Macpherson's Sts., March (W. Davison).  $k, l. \ \exists \ Q \ ad. \ sk.$ Aberdeen, S. Andamans, Dec. Hume Coll. (W. Davison). m-r.  $\mathcal{J}$   $\mathcal{Q}$  ad. sk. Port Blair, S. Andamans, Feb., Hume Coll. Aug., Nov. (W. Davison). Port Blair, S. Andamans, June Sharpe Coll. (R. J. Wimberley). t-o'. 3 2 ad. sk. Mt. Harriet, Andamans, March, Hume Coll. Nov., Dec. (W. Davison). Andamans, Jan., Feb., March, Nov. (R. G. W. R.). Tweeddale Coll. p'-z'.  $\mathcal{J}$   $\mathcal{Q}$  ad. et imm. sk. S. Andamans, March, May, Aug., Sept., (W. Davison). a''-f''. ♂♀ ad. Hume Coll. sk. g'', h''.  $\beta \$ ad. Sharpe Coll. S. Andamans, April, Oct. (R. G, W, R.).  $i^{\prime\prime}$ ,  $k^{\prime\prime}$ ,  $l^{\prime\prime}$ . Ad. et Andamans, June (R. C. Bea-Tweeddale Coll. imm. sk. van).

## 23. Palæornis longicauda.

Perruche de Malac, D'Aubent. Pl. Enl. 887.

La grande Perruche à long brins, Buff. Hist. Nat. Ois. vi. p. 155

(1779).

Blossom-headed Parrakeet, var. C, Malakka Parrakeet, Lath. Syn. i. p. 241 (1781); id. Suppl. p. 60 (1802); id. Gen. Hist. p. 165, with var. B (1822).

Psittacus longicauda, Bodd. Tabl. Pl. Enl. p. 53 (1783).

Psittacus malaccensis, Gm. S. N. i. p. 325 (1788); Vieill. Enc. Méth. iii. p. 1388 (1823).

Psittacus ginginianus, var.  $\delta$ , Lath. Ind. Orn. i. p. 100 (1790). La Perruche à nuque et jones rouges, Levaill. Perr. pl. 72 (1805). Psittacus erubescens, Shaw, Gen. Zool. viii. 2, p. 437 (1811); Raffl.

Trans. Linn. Soc. xiii. p. 281 (1820) (Sumatra).

Psittacus barbatulatus, Bechst. Kurze Uebers. p. 77 (1811); Kuhl, Consp. Psitt. p. 32 (1820); Voigt, Cuv. Uebers. p. 728 (1831); Müll. & Schleg. Verh. Land- en Volkenk. pp. 108, 377, 381 (1839-

Palæornis malaccensis, Vig. Zool. Journ. ii. p. 52 (1825); Steph. Gen. Zool. xiv. 2, p. 127 (1826); Wagl. Mon. Psitt. p. 514 (1832); Selby, Nat. Libr., Parrots, p. 75, pl. 3 (1836); Strickl. P. Z. S. 1842, p. 168; Blyth, J. A. S. B. xi. p. 788 (1842); Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); Blyth, Cut. B. Mus. A. S. B. p. 5 (1849); id. J. A. S. B. xix. p. 233 (1850); Mottl. & Dillw. Contr. N. H. of Lab. p. 26 (1855); Gould, B. of Asia, vi. pl. 10 (pt. x., 1858); Pelz. Novara Reis., Vög. pp. 97, 162 (1865). Conurus erythrogenys, Less. Tr. d'Orn. p. 215 (1831); Pucher. Rev.

et Mag. de Zool. 1853, p. 163; Sclat. P. Z. S. 1860, p. 71.

Psittacus (Belocercus) barbatulatus, Müll. & Schley. Verh. Land- en

Volkenk. pp. 107, 471 (1839-44).
Palæornis longicauda, G. R. Gr. Gen. B. ii. p. 410, n. 10 (1846);
Horsf. & Moore, Cat. B. Mus. E. I. Comp. ii. p. 618 (1856-58); Moore, P. Z. S. 1859, p. 453; Swinh. P. Z. S. 1870, p. 427, 1871,

p. 391; Salvad. Ucc. Born. p. 22 (1874); Sharpe, P. Z. S. 1875, p. 104 (Labuan); id. Ibis, 1877, p. 9; Brüggem. Abh. Bremen, v. p. 454 (1877), p. 527 (1878); David et Oust. Ois. Chine, p. 3 (1877); Sharpe, P. Z. S. 1879, p. 325; Hume, Str. Feath. vii. p. 51 (1879); Kelham, Ilis, 1881, p. 387; Rchnw. Vogelbild. t. v. f. 8 (1878-83); id. Journ. f. Orn. 1881, p. 243 (Consp. Psitt. p. 131); Nichols. Ibis, 1883, p. 239; Oates, B. of Brit. Burm. iii. p. 144 (1883); Sclat. List Vert. An. 8th ed. p. 322 (1883); Blas. Verh. z.-b. Ges. Wien, xxxiii. p. 23 (1883); id. Journ. f. Orn. 1884, p. 223; Vorderm. Nat. Tijdschr. Ned. Ind. xlvi. p. 224 (1886), xlix. p. 388 (1889); Itartert, Journ. f. Orn. 1889, p. 373; Everett, Journ. Str. Br. R. As. Soc. 1889, p. 177; Sharpe, Ibis, 1890, p. 1; Vorderm. Nat. Tijdschr. Ned. Ind. 1, p. 418 (1890).

Paleornis lengicaudus, G. R. Gr. List Psitt. Brit. Mus. p. 22 (1859); Blyth, Ibis, 1863, p. 5 (syn. emend.); Sclat. P. Z. S. 1863, p. 207; Wall. P. Z. S. 1864, pp. 282, 293; Schleg. Mus. P.-B. Psittaci, p. 84 (1864); id. op. cit. Rerue, p. 36 (1874); Garrod, P. Z. S. 1874, p. 587; Tristr. Cat. Coll. B. p. 75 (1889). Conurus (!) malaccensis, Pucher. Rev. et Mag. de Zool. 1853, p. 161.

Conurus (!) malaccensis, Prucher. Rev. et Mag. de Zool. 1855, p. 161.
Belurus malaccensis, Bp. Rev. et Mag. de Zool. 1854, p. 152, n. 148;
Souancé, Rev. et Mag. de Zool. 1856, p. 208; Sousu, Mus. Nac.
Lisb. Psittaci, p. 15 (1869).

Belocercus malaccensis, Bp. Naumannia, 1856, Consp. Psitt. n. 146.
Palæornis viridimystax, Elyth, J. A. S. B. xv. p. 446 (young) (1856);
id. Ibis, 1873, p. 80 (note).

? Palæornis affinis, Gould, B. of Asia, vi. pl. 11 (pt. x., 1858); Blyth, Ibis, 1865, p. 43.

Palæornis barbatulatus, Rosenb. Journ. f. Orn. 1862, pp. 59, 60; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 138, 139 (1863).

Palæornis longicaudatus, Finsch, Papag. ii. p. 77 (1868); Wald. Ibis, 1872, p. 362; Blyth, Ibis, 1873, p. 80 (note); Hume, Str. Feath. ii. p. 23 (1874); Wald. Ibis, 1874, p. 278; Blyth, B. of Burm. p. 54 (note) (1875); Gieb. Thes. Orn. iii. p. 9 (1872); Tweedd. Orn. Works, pp. 218, 274 (1881).

Belocereus longicaudus, G. R. Gr. Hand-list, ii. p. 143, n. 8063 (1870).

? Belocercus affinis, G. R. Gr. l. c. n. 8071 (1870).

? Palæornis javanica, Rosenb. (nec Osb.?) Malay. Archip. p. 220 (Nias) \* (1878); Salvad. Ann. Mus. Civ. Gen. (2) iv. p. 516 (note) (1887).

Adult male. Green, underneath yellowish; pileum grass-green; lores darker green; sides of the head and a broad collar round the nape vinous rcd; broad mandibular stripes black; interscapular region yellowish, washed with light blue; lower back and uropygium pale blue; upper tail-coverts green; quills blue, edged with green, and washed with the same colour towards the tips; upper wing-coverts olive-green; axillaries and under wing-coverts yellow; central tail-feathers blue, edged with green at the base, the others green; tail underneath dull yellow: iris yellow: upper mandible red, lower mandible brown; feet greyish. Total length 16 to 17 inches, wing 6, tail 9 to 10, bill 0.83, tarsus 0.5.

<sup>\*</sup> Von Rosenberg says that he never found *P. javanica* in Sumatra, so that most likely also the bird from Nias is not the Javan species. But conf. Walden, Ibis, 1872, p. 362.

Adult female. Green, pileum a little darker; sides of the head reddish; ear-coverts posteriorly washed with bluish; broad mandibular stripes dark green; quills blue, washed with green towards the tip; tail as in the male, only shorter; bill horny brown.

Young male. Resembles the female, only smaller; the uropygium

washed with blue, and the upper mandible red.

Hab. Pinang, Malacca Peninsula, Singapore, Sumatra, Nias, Billiton, Borneo, and Labuan.

a, b. Ad. sk.	Pinang (Dr. Cantor).	India Museum [P.].
c. d imm. sk.	Selangore, Nov. (W. Davison).	Hume Coll.
d, e. ♂♀ ad. sk.	Klang, Selangore, May, Oct. (W. Davison).	Hume Coll.
f. Ad. st.	Malacca.	Rajah Brooke [P.].
g, h, i. Ad. st.	Malacca.	Cuming Coll.
k-n. Ad. sk.	Malacca, Jan., Aug.	Hume Coll.
and the second second		
o, p. Ad. et imm.	Malacca (Dr. Cantor).	India Museum [P.].
$q-b'$ . $\mathcal{J} \ Q$ ad. sk.	Johore, Aug. (W. Davison).	India Museum [P.].
$c', d'. \not \supseteq ad. sk.$	Singapore Island, May, Nov.	Hume Coll.
c, a. 0 ± au. sn.	(W. Davison).	Tumo Con,
e', f'. Ad. sk.	Sumatra (A. R. Wallace).	Tweeddale Coll.
g'. Ad. sk.	Sumatra (A. R. Wallace).	Gould Coll.
$h'$ , $i'$ . $\beta \supseteq ad. sk.$	Sumatra.	A. R. Wallace, Esq. [P.].
k'. ♂ ad. sk.	Kaban, Sumatra (H. O.	Sharpe Coll.
6	Forbes).	1
l'. d' imm. sk.	R. Rawas, Sumatra (H. O. Forbes).	Sharpe Coll.
m'-o'. Ad. sk.	Billiton.	Tweeddale Coll.
		Hume Coll.
p'. of imm. sk.	Sarawak, Sept. (A. H. Everett).	
q'-t'. Ad. sk.	Sarawak (A. H. Everett).	Tweeddale Coll.
<i>u'</i> . Ad. sk.	Labuan $(H. Low)$	Sharpe Coll.
v'. Ad. sk.	Labuan (H. Low).	Tweeddale Coll.
w'. Skeleton.	•	

#### 36. POLYTELIS.

Polytelis, Wagl. Mon. Psitt. p. 489 (1832) P. barrabandi. Barrabandius, Bp. Consp. Av. i. p. 2 (1850) P. barrabandi. Polyteles, Gould, P. Z. S. 1863, p. 232.

Range. Confined to Australia.

# Key to the Species.

a. No red patch towards the tip of the innermost greater wing-coverts and innermost secondaries.
a'. General colour green; male with the sinciput and throat yellow; female with the forehead and cheeks tinged with bluish, and the inner webs of the lateral tail-feathers margined with rosy red
b'. General colour green; forehead and rump bluish; lower part of the cheeks and throat pale rose-colour; inner web of the lateral tail-

feathers margined with rosy red  $(\mathfrak{P})$ .....

barrabandı, p. 478.

alexandræ, p. 479.

b. A rosy-red patch towards the tips of the innermost great wing-coverts and innermost secondaries; general colour of the male, including the rump, jonquil-yellow; female duller, more olive, and with the inner webs of the lateral tail-feathers edged with rosy red

melanura, p. 479.

## 1. Polytelis barrabandi.

Psittacus barrabandii, Sw. (nec Kuhl) Zool. Illustr. i. pl. 59 (1820-21).

Scarlet-breasted Parrot, Lath. Gen. Hist. ii. p. 121 (1822).

Palleornis barrabandi, Vig. Zool 'Journ. ii. p. 56 (1825); Vig. & Horsf. Trans. Linn. Soc. xv. p. 287 (1826); Steph. Gen. Zool. xiv.
2, p. 128 (1826); Vig. Zool. Journ. iii. p. 244 (1827); Selby, Nat. Libr., Parrots, p. 69, pl. i. (1836); G. R. Gr. Gen. B. ii. p. 410, (1846).

Psittaeus swainsoni, Desm. Dict. Sc. Nat. xxxix. p. 39 (1826).

Paleornis? rosaceus, Vig. Zool. Journ. v. p. 274 (young) (1830); Lear, Parr. pl. 30 (1832); Less. Compl. de Buff. ix. p. (1837); id. op. cit. 2nd ed. p. 614 (1838); G. R. Gr. Gen. B. ii. p. 410,

n. 7 (1846).

Polytelis? barrabandi, Wagl. Mon. Isut. pp. 489, 519 (1832); Gould, Syn. B. Austr. pt. iv. pl. — figs. 2, 3 (—?); id. B. Austr. v. pl. 15 (pt. xviii., 1845); Blyth, Cat. B. Mus. A. S. B. p. 7 (1849); Rehnb. Neuentd. Vög. N. Holl. n. 454 (1850); Gould, Handb. B. Austr. ii. p. 31 (1865); G. R. Gr. Hand-list, ii. p. 138, n. 8005 (1870); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 464 (1878); Salvin. Cat. B. Strickl. Coll. p. 458 (1882); Sclat. List Vert. An. 8th ed. p. 324 (1883); Ramsay, Tab. List, p. 16, n. 482 (1888); Tristr. Cat. Coll. B. p. 75 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 40 (1891).

Psittacus sagittifer barrabandi, Bourj. Perr. pl. 4 (1837–38).

Psittacus sagittifer rosaceus, Bourj. Perr. pl. 6 (1837–38).

Barrabandius rosaceus, Bp. Consp. Av. i. p. 2 (1850); id. Rev. et Mag. de Zool. 1854, p. 153, n. 182; Souancé, Rev. et Mag. de Zool. 1856, p. 212; Bp. Naumannia, 1856, Consp. Psiit. n. 184.

Platycercus rosaceus, G. R. Gr. List Psitt. Brit. Mus. p. 9 (1859); Schleg. Mus. P.-B. Psittaci, p. 98 (1864); id. op. cit. Revue, p. 40

(1874).

Polyteles barrabandi, Gould, P. Z. S. 1863, p. 232; Garrod, P. Z. S. 1876, p. 692; Heine et Rchnw. Nomencl. Mus. Hein. Orn. p. 241 (1890).

Polyteles rosaceus, Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xi

(1863).

Platycercus barrabandi, Finsch, Papug. ii. p. 259 (1867); Gieb. Thes.
Orn. iii. p. 216 (1877); Rehnw. Vogelbild. t. iii. f. 1 (1878-83);
id. Journ. f. Orn. 1881, p. 133 (Consp. Psitt. p. 69).

Adult male. Green; sinciput, cheeks, and throat rich gamboge-yellow; immediately beneath the yellow of the throat a crescent of scarlet; lores and orbital region green; occiput emerald-green; quills, bastard-wing, and primary-coverts bluish green; quills underneath black; tail-feathers green, with a bluish tinge, underneath black, with lighter tips; thighs green, but sometimes red: "iris orange-yellow; bill rich red; feet brown" (Gould). Total length 16 inches, wing 7.2, tail 9, bill 0.7, tarsus 0.57.

Female. Green; face bluish grey; front part of the neck greyish green; chest slightly tinged with dull rose-colour; thighs searlet: primaries bluish green; central tail-feathers green, bluish in the middle; the remainder bluish green, with the inner webs edged with rosy red: "iris brown; bill pale reddish orange; feet dark brown" (Gould).

Hab. Australia, from New South Wales through the interior to

Victoria and South Australia.

Australia. Warwick. a. Ad. st. b. ♀ ad. sk. Warwick. Australia. Zool. Soc. Coll. c. Ad. st. Australia. d-g.  $\mathcal{J}$  ad. et ad. sk. Australia (J. T. Cockerell). Salvin-Godman Coll. h. Imm. sk. Australia. Purchased. New South Wales. Hume Coll. *i*. ♂ ad. sk.

## 2. Polytelis alexandræ.

Polyteles alexandræ, Gould, P. Z. S. 1863, p. 232.

Polytelis alexandræ, Gould, Handb. B. Austr. ii. p. 32 (1865); id. B. Austr., Suppl. pl. 62 (pt. iv., 1867); G. R. Gr. Hand-list, ii. p. 138, n. 8007 (1870); Diggles, Syn. B. Austr. p. 76, pl. 76 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 466 (1878); id. Tub. List, p. 16, n. 484 (1888); id. Cat. Austr. Birds, Psittaci, p. 43 (1891); Ibis, 1891, p. 298.

Platycercus alexandre, Finsch, Papag, ii. p. 261 (1868); Rehnw. Journ. f. Orn. 1881, p. 191 (Consp. Psitt. p. 69); id. Vogelbild.

Nachtr. 17 (1883).

Forehead delicate light blue; lower part of the cheeks, chin, and throat rose-pink; head, nape, mantle, back, and scapulars olive-green; lower part of back and rump blue; shoulders and wing-coverts pale yellowish green; external webs of the principal primaries dull blue; breast and abdomen olive-grey; thighs rosy red; upper tail-coverts olive, tinged with blue; two centre tail-feathers bluish olive-green; the two next on each side olive-green on their outer webs, and dark brown on their inner ones; the remaining tail-feathers tri-coloured, the central portion being black, the outer olive-grey, and the inner rosy red: bill coral-red; feet mealy brown. Total length 14 inches, bill  $\frac{1}{2}$ , wing 7, tail 9, tarsus  $\frac{7}{8}$ . (Gould.)

Hab. Central and Northern Australia.

Quite recently, in the 'South Australia Register,' Aug. 23, 1890, Mr. M. Symonds Clark has mentioned and described two living specimens of this rare bird, which were taken from the nest in the neighbourhood of Charlotte Waters, about lat. 25° 40′ S., long. 134° E.

# 3. Polytelis melanura.

Palæornis melanurus, Vig. in Lear, Parr. pl. 28 (ad.) (1832). Palæornis anthopeplus, Vig. in Lear, Parr. pl. 29 (young) (1832). Palæornis melanura, Sturt, Exped. in Austr. pl. —, p. 191 (1834). Psittacus sagittifer melanura, Bourj. Perr. pl. 5 (ad.) (1837–38). Psittacus sagittifer anthopeplus, Bourj. Perr. pl. 7 (young) (1837–38). Polytelis melanurus, Gould, Syn. B. Austr. pt. iv. pl. —, f. 1 (— ?); id. B. Austr. v. pl. 16 (pt. xviii., 1845); Rchnb. Neuentd. Vög. N. Holl. n. 453 (1850); Bolle, Journ. f. Orn. 1856, p. 170; Gould, Handb. B. Austr. ii. p. 33 (1865); G. R. Gr. Hand-list, ii. p. 138, n. 8006 (1870); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 465 (1878); Salvin, Cat. B. Strickl. Coll. p. 458 (1882); Sclat. List Vert. An. 8th ed. p. 324 (1883); Ramsay, Tab. List, p. 16, n. 483 (1888); Tristr. Cat. Coll. B. p. 75 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 42 (1891).

Platycercus melanurus, G. R. Gr. Gen. B. ii. p. 410, n. 16 (1846); id. List Psitt. Brit. Mus. p. 9 (1859); Homeyer, Journ. f. Orn. 1859, p. 360; Schleg. Mus. P.-B. Psittaci, p. 99 (1864); Finsch, Papag. ii. p. 256 (1868); Schleg. Mus. P.-B. Psittaci, Rerue, p. 40 (1874); Gieb. Thes. Orn. iii. p. 218 (1877); Reluw. Vogelbild. t. iii. f. 6 (1878-83); id. Journ. f. Orn. 1881, p. 134 (Consp. Psitt.

p. 70).

Psittacus melanurus, Thienem. Fortpfl. d. yes. Vöy. p. 73 (1846).
Barrabandius melanurus, Bp. Consp. Av. i. p. 2 (1850); id. Rev. et
Mag. de Zool. 1854, p. 153, n. 183; Souancé, Rev. et Mag. de
Zool. 1856, p. 212; Bp. Naumannia, 1856, Consp. Psitt. n. 185.
Polyteles melanurus, Sclat. P. Z. S. 1859, p. 433; Gould, P. Z. S.
1863, p. 232; Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xi (1863).

Adult male. Head, neck, shoulders, rump, and all the under surface jonquil-yellow; head, nape, and upper tail-coverts tinged with olive; interscapular region olive; scapulars blackish; a large patch on the wing at the tip of the innermost greater wing-coverts red; also the innermost secondaries on their outer web near the tip red; quills black, deep purple-blue on the outer web, underneath brown; tail-feathers deep purple-blue, underneath black with the tip lighter: "iris bright red; bill scarlet; feet ash-grey" (Gould). Total length about 16 inches, wing 7.5, tail 8.5, bill 0.8, tarsus 0.65.

Female. Dull olive-green, back and scapulars darker; rump and upper tail-coverts olive, the longer upper tail-coverts duller; breast and abdomen olive, with a yellowish tinge; a great patch on the wing-coverts greenish yellow; primaries, some of the secondaries, bastard-wing, and primary-coverts deep blue, margined externally with olive; the innermost secondaries and the innermost greater wing-coverts red towards their tips; under wing-coverts yellowish olive; tail-feathers bluish green, black on the inner web and underneath, the three (sometimes all the five?) lateral tail-feathers margined on their inner web and tipped with rosy red: "bill scarlet; feet ashy grey" (Gould).

Hab. South Australia, from New South Wales to Western

Australia.

Murray R., S. Australia. Murray R., S. Australia. Sir G. Grey [P.]. Sir G. Grey [P.]. a. Ad. st. b. Imm. sk. Capt. Sturt [P.]. c, d. Ad. sk. S. Australia. e, f, y. Ad. sk. S.W. Australia (J. T. Cockerell). Salvin-Godman Coll. h. d ad. sk. Victoria. Hume Coll. Adelaide, S. Australia. Purchased. k. Imm. sk. Tweeddale Coll. Australia. l. Ad. sk. Gould Coll. m, n. Skeletons. Australia.

#### 37. PTISTES.

Type. Ptistes, Gould, Handb. B. Austr. ii. p. 37 (1865) . P. erythropterus. Range. Australia and Timor Group.

## Key to the Species.

Upper tail-coverts vellowish green; tail grassgreen, tipped with yellow-green; rump blue.

a. Rump deeper blue; interscapular region black, a broad red patch on the upper wingcoverts (male); interscapular region green, tail-feathers edged with rose-colour on the inner web (female) .....

b. Rump paler blue; interscapular region green; only the anterior upper wing-coverts red; outer tail-feathers broadly edged with yellowish on the inner web.

a'. Upper wing-coverts yellowish green; inedged with blue in the adult male ....

terscapular region green, with the feathers jonquillaceus, p. 483.

b'. Upper wing-coverts green like the back.. wetterensis, p. 484.

erythropterus, p. 481.

# 1. Ptistes erythropterus.

Crimson-winged Parrot, Lath. Syn. i. p. 299, n. 103 (1781); id.

Suppl. i. p. 60 (1787); id. Gen. Hist. ii. p. 253 (1822).
Psittacus erythropterus, Gm. S. N. i. p. 343, n. 120 (1788); Lath.
Ind. Orn. i. p. 126, n. 130 (1790); Beckst. Lath. Uebers. p. 101 (1811); Vieill, N. D. xxv. p. 373 (1817); Kuhl, Consp. Psitt. p. 53 (ad. bird only) (1820); Vieill. Enc. Méth. iii. p. 1404 (1823); Thienem. Fortpfl. d. ges. Vög. p. 73 (1846).

Psittacus melanotus, Shaw, Nat. Misc. pl. 653 (1789-1813); id. Gen.

Zool. viii, 2, p. 467 (1811).

Platycercus erythropterus, Vig. Zool. Journ. i. p. 528 (1825); Vig. & Horsf. Trans. Linn. Soc. xv. p. 284 (syn. emend.) (1826); Steph. Gen. Zool. xiv. 2, p. 123 (1826); Vig. Zool. Journ. iii. p. 244 (1827); Wagl. Mon. Psitt. p. 536 (1832); Lear, Parr. pls. 14, 15 (1832); Bourj. Perr. pl. 35 (ad.) (1837-38); Less. Compl. de Buff. Ois. ix. p. 223 (partim) (1837), 2nd ed. p. 612 (1838); Hartl. Syst. Verz. Ges. Mus. p. 84 (1844); G. R. Gr. Gen. B. ii. p. 408, n. 23 (1846); Blyth, Cat. B. Mus. A. S. B. p. 7 (1849); G. R. Gr. List Psitt. Brit. Mus. p. 9 (1859); Schleg. Mus. P.-B. Psittaci, p. 92 (1864); Nitscah, Propulaga (Part) ed.) p. 101 (1867) p. 92 (1864); Nitzsch, Pterylogr. (Engl. ed.) p. 101 (1867); Finsch, Papag. ii. p. 262 (partim) (1868); Schleg. Mus. P.-B. Psittaci, Revue, p. 38 (1874); Gieb. Thes. Orn. iii. p. 217 (partim) (1877); Rehnw. Vogelbild, t. iii, f. 3 (1878-83); id. Journ. f. Orn. 1881, p. 126 (Consp. Psitt. p. 62).

Aprosmictus erythropterus, Gould, P. Z. S. 1842, p. 112; id. B. Austr. v. pl. 18 (pt. viii., 1842); Rehnb. Neuentd. Vög. N. Holl. n. 185 (1850); Bp. Consp. Av. i. p. 3 (syn. emend.) (1850); id. Rev. et Mag. de Zool. 1854, p. 153, n. 160; Souancé, Rev. et Mag. de Zool. 1856, p. 210; Bp. Naumannia, 1856, Consp. Psitt. n. 161; Bolle, Journ. f. Orn. 1856, p. 170; Zuchold, Journ. f. Orn. 1858, pp. 39, 234; Sclat. P. Z. S. 1861, pp. 234, 365; Gould, P. Z. S. 1863,

p. 232; Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xiii (1863); Rosenb. Journ. f. Orn. 1864, p. 112 (partim); G. R. Gr. Hand-list, ii. p. 138, n. 8008 (1870); Garrod, P. Z. S. 1874, p. 587; Ramsay,
 Pr. Linn, Soc. N. S. W. ii. p. 193, n. 469 (1878); Salvad. Orn. Pap. e Mol. i. p. 144 (1880); Salvin, Cat. B. Strickl. Coll. p. 459 (1882); Sclat. List Vert. An. 8th ed. p. 324 (partim) (1883); Broadb. Pr. R. Soc. Queensl. ii. p. 124 (1885), iv. p. 27 (1887); Ramsay, Tab. List, p. 16, n. 486 (1888); id. Cat. Austr. Birds, Psittaci, p. 37 (1891).

Platycercus (Psittacus) melanotus, Less. Descr. Mamm. et Ois, p. 184

(1847).

Ptistes erythropterus, Gould, Handb. B. Austr. ii. p. 37 (1865); Ramsay, P. Z. S. 1875, p. 602; Cab. u. Rehnw. Journ. f. Orn. 1876, p. 324 (Peel Island); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 255 (1889).

? Aprosmictus erythropterus, var., G. R. Gr. Cat. B. New Guin. p. 59 (New Guinea!) (1859); id. P. Z. S. 1861, p. 436 (New Guinea,

Wallace!).

? Aprosmictus erythropterus (part.), Rosenb. Journ. f. Orn. 1864, p. 112 (South Coast of New Guinea).

#### Smaller Race.

Aprosmictus erythropterus, Elsey (nec Gm.), P. Z. S. 1857, pp. 27, 221; Sclat. List Vert. An. 8th ed. p. 324 (1883) (part).

Ptistes coccineopterus, Gould, Handb. B. Austr. ii. p. 39 (1865); Masters, Pr. Linn. Soc. N. S. W. ii. p. 274 (1877); Ramsay, Pr. Linn. Soc. N. S. W. (2) i. p. 1094 (1886).

Platycercus erythropterus (part.), Finsch, Papag. ii. p. 262 (1868); Gieb. Thes. Orn. iii. p. 217 (partim) (1877); De Vis, Pr. R. Soc.

Queensl. iv. p. 236 (1889).

Aprosmictus coccineopterus, G. R. Gr. Hand-list, ii. p. 139, n. 8009 (1870); Ramsay, Pr. Linn. Soc. N. S. W. ii, p. 193, n. 470 (1878); id. Tab. List, p. 16, n. 486 a (1888); Tristr. Cat. Coll. B. p. 75

Aprosmictus coccinopterus, Sclat. P. Z. S. 1871, p. 769.

Platycercus coccineopterus, Rehnw. Journ. f. Orn. 1881, p. 127 (Consp. Psitt. p. 63); id. Voyelbild. Nachtr. n. 14 (1883).

Aprosmictus erythropterus, var. coccineopterus, Ramsay, Cut. Austr. Birds, Psittaci, p. 39 (1891).

Adult male. Green, underneath yellowish green; crown and nape verditer-green; interscapular region and scapulars black; lower back and rump deep blue; upper tail-coverts yellowish green; primaries dark green, secondaries nearly black, the inner ones dark green; upper wing-coverts rich crimson-red, with the base of the feathers yellow; edge of the wing green; a few black feathers below the bend of the wing; under wing-coverts yellowish green; quills underneath dark brown; tail above dark green, underneath dark brown, the tip of the tail-feathers yellowish green: "irides reddish orange in some, scarlet in others; bill orange-scarlet; feet olivebrown" (Gould). Total length 13.5 to 12.5 inches, wing 8 to 7.5. tail 5.6 to 5.2, bill 0.75, tarsus 0.68.

Adult female. Dull green, under surface yellowish green; rump blue; upper tail-coverts vellowish green; some of the outermost median upper wing-coverts edged with red, the outermost greater upper wing-coverts red; secondaries blackish green; tail as in the male, but the lateral tail-feathers edged with pink on the inner web; the pink colour appears also on the yellowish-green tip of the tail-feathers: "irides olive-brown; bill light horn-colour" (Gould).

Hab. Eastern Australia, from Rockingham Bay to Dawson River,

and North Australia, from Derby to Cape York.

The Northern birds have been specifically separated as A. coccineopterus, Gould. They are generally smaller than the Eastern ones; but there are in the British Museum some specimens from Northern and Western Australia which are as large as the Eastern, so that I have been compelled to unito P. coccineopterus with P. erythropterus.

### Larger Race.

a. Ad. st.	Australia.	J. Gould, Esq. [P.].
b, c. Ad. sk.	Australia.	Gould Coll.
d. Ad. sk.	Australia.	Tweeddale Coll.
e. Ad. sk.	Australia.	Sir T. Mitchell [P.].
f. Ad. sk.	W. of Upstart Bay, May.	J. B. Jukes, Esq. TP.
g, h. of ad. et	Australia.	Salvin-Godman Coll.
ad. sk.		
i, k. Ad. sk.	S. Queensland.	Tweeddale Coll.
l, m. Ad. sk.	Western Australia.	Sir G. Grey [P.].
n, o. Ad. sk.	N. Australia.	Purchased.
p, q. Skeletons.		

### Smaller Race (A. coccineopterus, Gould).

r, s. Ad. st.	Port Essington.	Capt. W. Chambers
t. ♂ ad. sk.	Port Essington, Nov.	[P.]. Voy. H.M.S. 'Rattle- snake.'
<i>u</i> , <i>r</i> . Ad. et [♀] imm. sk.	N.W. Australia.	J. R. Elsey, Esq. [P.].
w. Ad. sk.	Point Pearce.	J.R. Elsey, Esq. [P.].
x, y. Ad. sk.	N. Australia (T.C.Cockerell).	Salvin-Godman Coll.
z. Ínim. sk.	N.W. Australia.	Capt. Bowyer Bower
	A ( 1°	[P.]. Linnean Soc. Coll.
a'. Ad. sk.	Australia.	Linnean Soc. Coll.

# 2. Ptistes jonquillaceus.

Psittacus jouquillaceus, Vieill. N. D. xxv. p. 352 (var.?) (New Holland!) (1817); id. Enc. Méth. iii. p. 1390 (1823); Pucher. Rev. et Mag. de Zool. 1852, p. 563; Hartl. Journ. f. Orn. 1855, p. 422.

Psittacus erythropterus (partim), Kuhl, Consp. Psitt. p. 53 (1820); Quoy et Gaim. (nec Gm.) Voy. de l'Uran. p. 116, pl. 27 (1824)

Platycercus erythropterus, Less. (nec Gm.) Tr. d'Orn. p. 208 (Timor) (1831); Bourj. Perr. pl. 35 b (ad.) (1837-38); Less. Compl. d Euff., Ois. ix. p. 223 (partim) (1837), 2nd ed. p. 512 (1838). Platycercus jonquillaceus, Wagl. Mon. Psitt. p. 533, n. 13 (1832) (?)

G. R. Gr. Gen. B. ii. p. 408, n. 9 (1846) (?); Rehnw. Journ. f.

Orn. 1881, p. 126 (Consp. Psitt. p. 62); id. Vogelbild. Nachtr. 13

Platycercus vulneratus, Wagl. Mon. Psitt. p. 533 (1832); G. R. Gr. Gén. B. ii. p. 408 (1846); Pucher. Rev. et Mag. de Zool. 1852, p. 563; Hartl. Journ. f. Orn. 1855, p. 422; G. R. Gr. List Psitt. Brit. Mus. p. 10 (1859); Rosenb. Journ. f. Orn. 1862, pp. 66, 67 (Timor); id. Nat. Tijdschr. Ned. Ind. 1863, pp. 145, 147; Wall. P. Z. S. 1864, pp. 282, 293 (Timor); Schley. Mus. P.-B. Psittaci, p. 92 (1864); Finsch, Papag. ii. p. 265 (1868); Schleg. Mus. P.-B. Psittaci, Revue, p. 39 (partim; specim. from Timor only) (1874); Gieb. Thes. Orn. iii. p. 220 (1877).

Psittacus vulneratus, S. Müll. Verh. Land- en Volkenk. p. 181 (Timor) (1839-44).

Aprosmietus vulneratus, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 162; Souancé, Rev. et Mag. de Zool. 1856, p. 210; Ép. Nau-mannia, 1856, Consp. Psitt. n. 162; Sclat. P. Z. S. 1860, p. 226; Wall. Ibis, 1861, p. 348; id. P. Z. S. 1863, p. 484 (Timor); G. R. Gr. Hand-list, ii. p. 139, n. 8010 (1870); Tristr. Cat. Coll. B. p. 75 (1889).

Aprosmietus? melanotus, Bp. (nec Less.) Rev. et Mag. de Zool. 1854,

p. 153, n. 161.

Psittaeus rubripennis, Schleg. Handleid. p. 183 (Celebes!) (1857). Aprosmietus erythropterus, part., Rosenb. Journ. f. Orn. 1864, p. 112. Ptistes vulneratus, Gould, Handb. B. Austr. ii. p. 37 (1865).

Adult male. Green, interseapular region darker, with the feathers edged with blue; rump bright blue; upper tail-coverts yellowish green; under surface yellowish green; upper wing-coverts yellowish green, some of the outermost ones red; a blue spot near the bend of the wing; quills dark green, the primary-coverts dark green edged with blue; tail dark green, tipped with greenish yellow, lateral tail-feathers edged on the inner web with yellowish; tail and quills underneath black: bill red; feet dusky. Total length 13.5 inches, wing 6.9, tail 6.4, bill 0.8, tarsus 0.7.

Adult female. Like the male, but wants the blue edges to the feathers of the interscapular region and the blue spot near the bend

of the wing.

Young. Like the female, but the vellowish tinge on the upper wing-coverts is very slight or scarcely perceptible.

Hab. Timor.

E. Timor. u, b. c. ♂ ad., ♂♀ A. R. Wallace, Esq. [C.]. imm. sk. Timor Coupang. d. ♀ ad. sk. A. R. Wallace, Esq. [C.].

e. Skeleton.

#### 3. Ptistes wetterensis.

Platycercus vulneratus (part.), Schleg. Mus. P.-B. Psittaei, Revue, p. 39 (specim. from Wetter) (1874).

The bird from Wetter, of which there is but one female in the British Museum, according to Schlegel differs from the Timor form in being smaller and in having less red on the wing-coverts, these being without yellowish tinge, and of the same green colour as that of the back.

Female. Total length 12.5 inches, wing 7.1, tail 6.3, bill 0.8, tarsus 0.75.

Hab. Wetter Island, on the east of Timor.

 $a. \ \ 2 \ ad. \ sk.$ 

Wetter (Hoedt).

Tweeddale Coll. (Type of species.)

#### 38. APROSMICTUS.

Type.

Aprosmictus, Gould, P. Z. S. 1842, p. 111 ...... A. cyanopygius.

Range. Australia and the Austro-Malayan Subregion.

### Key to the Species.

Upper tail-coverts not yellowish green.

a. Wings green.

a'. Upper tail-coverts more or less olive-green; the light band on the upper wing-coverts of the male verdigris-green; red-colour scarlet. cyanopygius, p. 486. b'. Upper tail-coverts blue like the rump; red-

colour carmine.

a". A yellow-green patch on the upper wing-

coverts of the males.

a'''. Head red, nape from the occiput blue; interscapular region black (male); female with no light patch on the wing-coverts; head, neck, and breast green like the back; feathers of the throat and breast edged with dull carmine-red .....

b". Head and neck red; no blue colour on the nape; interscapular region blue, scapulars black (male); female resembling that of A. chloropterus . . . .

b". Wings, both in males and females, with no light band or patch on the wing-

coverts.

c"'. Two outer tail-feathers broadly edged with rosy red on the inner web; back, rump, and upper tail-coverts blue in the adult birds, green, with more or less blue, in the young birds.

a4. Bill black, with the base of the upper mandible red .....

b4. Bill entirely black, or only tipped with light horn-colour .....

d". Tail-feathers with the inner webs entirely black in the adult birds, tipped with rosy red in young birds.

 $c^4$ . Bill black, with the base of the upper mandible red; back blue in the adult bird, green in the young

 $d^4$ . Bill all reddish also in the adult bird; back in the adult birds (?) green, more or less tinged with blue on the edges of the feathers .....

b. Wings like the back and tail, deep blue .....

chloropterus, p. 488.

callopterus, p. 489.

amboinensis, p. 489.

burnensis, p. 4

dorsalis, p. 491.

sulaensis, p. 492. hypophonius, p. 492.

## 1. Aprosmictus cyanopygius \*.

Tabuan Parrot, Phill. Voy. Bot. Bay, pl. to p. 153 (1789); White, Journ. of a Voy. to New South Wales, pl. to p. 168 (ad.), 169 (jun.) (1790).

Psittacus tabuensis, var.  $\beta$ , Lath. Ind. Orn. i. p. 88 (1790). Psittacus tabuanus, Shuw, Mus. Lever. ii. p. 29, pl. 8 (1796).

La Grande Perruche à collier et croupion bleus, Levaill. Perr. pls. 55 ( $\circlearrowleft$  ad.), 56 ( $\circlearrowleft$  jun.) (1801). Tabuan Parrot, var. A ( $\circlearrowleft$ ) et B ( $\circlearrowleft$  jun.), Lath. Syn. Suppl. ii. p. 81

(1802).

Psittacus tabuensis, var.  $\gamma$ , Lath. Suppl. Ind. Orn. p. xx ( $\mathcal{Q}$  jun.) (1802).

Psittacus tabuensis, Shaw, Gen. Zool. viii. 2, p. 407 (excl. var.), pl. 55 (1811); Bechst. Kurze Ueb. p. 69 (1811); Hahn, Orn. Atl., Papag. p. 15, t. 4 (1834).

Psittacus cyanopygius, Vieill. N. D. xxv. p. 339 (1817) (ex Levaillant); id. Enc. Méth. iii. p. 1381 (1823); id. Gal. des Ois. iii.

pp. 1, 2, pls. 1, 2 (—?). Psittacus scapulatus, Bechst. fide Kuhl, Consp. Psitt. p. 56 (1820); Voigt, Cuv. Uebers. p. 731 (1831).

Platycercus scapularis (errore?), Kuhl, Consp. Psitt. p. 57 (1820); Sw. Zool. Ill. 2nd ser. pl. 26 (1829); Less. Tr. d'Orn. p. 207 (1831); Sw. Class. B. ii. p. 305 (1836); Less. Compl. de Buff. ix. p. 219 (1837), 2nd ed. p. 611 (1838).

Scarlet and Green Parrot, Lath. Gen. Hist. ii. p. 116, var. A, B (jun.) (1822).

#### Aprosmictus insignissimus.

Aprosmictus insignissimus, Gould, P. Z. S. 1874, p. 500, 1875, p. 314; id. B. New Guin. pt. i. pl. 9 (1875); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 468, et p. 208 (lusus nat.) (1878); id. Tab. List, p. 30 (1888).

Platycercus insignissimus, Rchnw. Journ. f. Orn. 1881, p. 127 (Consp. Psitt. p. 63); id. Vogelbild. Nachtr. n. 15 (1883).

"Head emerald-green, excepting the centre of the crown and a patch on the nape, these parts being scarlet, the green forming a narrow frontal line between the nostrils and the crown; round the hind neek a narrow collar of emerald-green; back, including the mantle and scapulars, deep grass-green, each feather obscurely edged with darker colour; lower back and rump shining blue; upper tail-coverts bright grass-green; all the tail-feathers above deep grass-green, with indistinct narrow bars of darker colour on every one of them; the underside of the tail uniform purplish black; wings green, with a broad longitudinal patch of yellow, many of these feathers edged with searlet, this mark being very indistinct and similar to that seen in the male Itistes; under wing-coverts greenish blue; inner lining of quills purplish black like the lower surface of the tail; under surface of body scarlet, with dashes of bright green on the flanks; under tail-coverts green, fringed with scarlet: both mandibles of the bill bright orange-red; legs blackish. Total length 15½ inches, wing 9, tail  $7\frac{2}{3}$ , tarsus  $\frac{7}{8}$ ." (Gould.)

<sup>\*</sup> The following bird, according to Ramsay, is only an individual variety (lusus naturæ) of Aprosmictus cyanopygius. The only specimen known was shot a few miles north of the village of Dalby, on the Darling Downs, in Queensland. Mr. Shaw, who shot the bird, informed Mr. Ramsay that it had paired with a female, in the ordinary plumage of that sex, of A. cyanopygius:

Platycercus scapulatus, Vig. Zool. Journ. i. p. 528 (1825); Vig. & Mors. F. Scaphadas, Vy. Boc. voc. 1, p. 526 (1825); Vy. Horsf. Trans. Linn. Soc. xv. p. 284 (1826); Steph. Gen. Zool. xiv. 2, p. 122 (1826); Vig. Zool. Journ. iii. p. 244 (1827); Wagl. Mon. Psitt. p. 537 (1832); Hartl. Syst. Verz. Ges. Mus. p. 84 (1844); G. R. Gr. Gen. B. ii. p. 408, n. 25 (1846); id. List Psitt. Brit. Mus. p. 10 (1859); Homeyer, Journ. f. Orn. 1859, p. 360; Schleg. Mus. P.-B. Psittaci, p. 89 (1864); Russ, Journ. f. Orn. 1871, p. 236; Schleg. op. cit. Revue, p. 37 (1874); Gulliv. P. Z. S. 1875, p. 489; Rehnw. Vogelbild. t. iii. f. 4 (♂ & ♀) (1871-83); id. Journ. f. Orn. 1881, p. 127 (Consp. Psitt. p. 63).

Aprosmictus scapulatus, Gould, P. Z. S. 1842, p. 112; id. B. Austr. v. pl. 17 (pt. viii., 1842); Rehnb. Neuentd. Vög. N. Holl. n. 184 (1850); Blyth, Cat. B. Mus. A. S. B. p. 7 (1849); Bp. Rev. et (1850); Blyth, Cat. B. Mus. A. S. B. p. 7 (1849); Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 163; Souancé, Rev. et Mag. de Zool. 1856, p. 211; Bp. Naumanniu, 1856, Consp. Psitt. n. 164; Bolle, Journ. f. Orn. 1856, p. 170; Horsf. f. Moore, Cat. B. Mus. E.I. Comp. ii. p. 624 (1858); Sclat. P. Z. S. 1861, p. 234; Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xiii (1863); Gould, Handb. B. Austr. ii. p. 35 (1865); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 467 (1868); Müll. P. Z. S. 1869, p. 279; Sund. Meth. nat. Av. disp. Tent. p. 71 (1872); Garrod, P. Z. S. 1873, pp. 465, 634, 1874, p. 587; Forbes, Ibis, 1877, p. 282; Sclat. List Vert. An. 8th ed. p. 324 (1883); Broadb. Pr. R. Soc. Oneensl. iv. p. 27 (1887); Ramsay, Tab. List, p. 16, n. 485 Queensl. iv. p. 27 (1887); Ramsay, Tub. List, p. 16, n. 485 (1888); Cox & Hamilt. Pr. Linn. Soc. N. S. W. (2) iv. p. 417 (1889); De Vis, Rep. Sc. Exp. N. Queensl. p. 33 (1889); North, Descr. Cat. Nests & Eygs Austr. Birds, p. 255 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 35 (1891).

Platycercus cyanopygus, Finsch, Papag. ii. p. 245 (1868); Russ, Journ. f. Orn. 1870, p. 30; Gieb. Thes. Orn. iii. p. 216 (1877). Apresmictus cyanopygus, G. R. Gr. Hand-list, ii. p. 139, n. 8011

(1870); Sulvin, Cut. B. Strickl. Coll. p. 459 (1882).

Adult male. Head, neck, and all the under surface scarlet; back and wings green; a line bounding the scarlet at the back of the neck, also the rump, deep blue; a band along the cubital wingcoverts pale verdigris-green; under wing-coverts green edged with blue; inner web and under surface of the quills black; under tailcoverts scarlet, but the base of the feathers dark blue; upper tailcoverts dark olive; tail above black, with an olive tinge, the outer tail-feathers show a blue tinge; tail underneath black: "irides yellow; bill scarlet; legs mealy brown" (Gould). Total length 17 inches, wing 8.7, tail 8.5, bill 0.95, tarsus 0.7.

Female. Head, nape, back, and wing green; throat and chest dull green, tinged with red; abdomen scarlet; under tail-coverts green, broadly edged with red; rump blue, with the base of the feathers green; upper tail-coverts green; tail above green, the lateral tail-feathers tinged with bluo on the outer web; bill

dusky.

Young. Resembles the female, but has the lateral tail-feathers with rose-colour tips.

Hab. Eastern Australia, from Port Denison to Victoria.

a. Ad. st. [Variety.] Zoological Society's Coll. Australia. b. Ad. st. A. Cunningham, Esq. [P.].

c, d. Ad. et imm. sk. e, f. Ad. sk. g. ♂ ad. sk. h, i. ♂ ad. sk.

k. 3 ad. sk. l. Imm. sk. m. Imm. sk. n. ♀ad. skeletou. o, p. Skeletons.

N.E. Queensland. Clarence River. New South Wales (J. T. Cockerell). New South Wales. Sydney.

New South Wales.

Gould Coll.

Sydney Museum [P.]. Tweeddale Coll. Salvin-Godman Coll.

Gould Coll. Tweeddale Coll. Tweeddale Coll.

## 2. Aprosmictus chloropterus.

Aprosmictus chloropterus, Ramsay, Pr. Linn. Soc. N. S. W. iii. p. 251 (1879), iv. p. 96 (1879); Salvad. Ibis, 1879, p. 320; Sharpe, Journ. Linn. Soc., Zool. xiv. p. 628 (1879); Rehwe. v. Schal. Journ. f. Orn. 1880, p. 208; Salvad. Orn. Pap. e Mol. i. p. 136 (1880); id. Ibis, 1881, p. 287; Sharpe, Journ. Linn. Soc., Zool. xvi. p. 425 (1882); Salvad. Ann. Mus. Civ. Gen. xviii. p. 418, n. 4 (1882); id. Orn. Pap. e Mol. iii. p. 515 (1882); Finsch u. Meyer, Zeitschr. f. ges. Orn. 1886, p. 3; Salvad. Mem.

R. Ac. Sc. Tor. ser. 2, xl. p. 159 (1889).

Aprosmictus broadbenti, Sharpe, Ann. & May. N. H. (5) iii. p. 313 (1879); id. Ibis, 1879, p. 367, 1880, p. 379; Rehnw. u. Schal. Journ. f. Orn. 1879, p. 312.

Platycercus chloropterus, Rchnw. Journ. f. Orn. 1881, p. 130 (Consp. Psitt. p. 66); id. Vogelbild. Nachtr. 16 (1883).

Adult male. Head, neck, and under surface carmine-red; nape, rump, upper tail-coverts, and under wing-coverts bright blue; interscapular region and scapulars black, with a slight tinge of green; under tail-coverts dark blue, broadly edged with red; wings dark green; a yellow-green long patch from the bend of the wing to the innermost greater upper wing-coverts; edge of the wing blue; tail above dark blue, with a tinge of green towards the base; quills and tail below black: bill black, with the base of the upper mandible red; feet black. Total length 14.8 inches, wing 7.6, tail 8.7, bill 0.9, tarsus 0.7.

Female. Green; throat and breast duller, with the feathers edged with dull red; abdomen red; under tail-coverts dark blue, broadly edged with red; rump and upper tail-coverts blue; central tail-feathers dark green, towards the tip blue, lateral tail-feathers more blue and less green at the base, all tipped with rosy red: bill

and feet as in the male.

Young. Like the female, but with no red edges to the feathers of the throat and breast; the bill in the dry skin dark towards the base, yellowish towards the tip.

Hab. South-eastern New Guinea.

a. Ad. sk. Port Moresby. — Broadbent [C.]. (Type of A. broadbenti, Sharpe.) b. Ad. sk. Port Moresby. Gould Coll. c. Juv. sk. Gould Coll.

C. Hunstein, Esq. [C.].  $d, e. \subsetneq ad. et 3$ Goldie River. imm. sk. Astrolabe Mts., June Tweeddale Coll. f. 3 ad. sk. (A. Goldie). Dr. Romilly [P.]. q. Imm. sk. Astrolabe Mts.

### 3. Aprosmictus callopterus.

Aprosmictus callopterus, D'Alb. e Salvad. Ann. Mus. Civ. Gen. xiv. Pp. 29, n. 10 (1879); Gould, B. New Guin. pt. x. pl. 1 (1879); Rehnw. u. Schal. Journ. f. Orn. 1879, p. 312; Salvad. Orn. Pap. e Mol. i. p. 135 (1880); id. Ibis, 1881, p. 287; id. Ann. Mus. Civ. Gen. xviii. p. 418, n. 3 (1882); id. Orn. Pap. e Mol. iii. p. 514 (1882); Meyer, Zeitschr. f. ges. Orn. iii. p. 3 (1886); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 159 (1889).

Platycercus callopterus, Rchnic. Journ. f. Orn. 1881, p. 129 (Consp.

Psitt. p. 65); id. Vogelbild. Nachtr. 16 (1883).

Adult male. Head, neck, and under surface carmine-red; interscapular region, uropygium, and upper tail-coverts bright blue; scapulars black, edged with blue; wings green, the innermost secondaries and the outermost middle upper wing-coverts very dark, nearly black; smaller, median, and innermost greater upper wingcoverts yellowish green, forming a large patch on the wing-coverts; tail above blue-black, underneath black: "bill black, base of the upper mandible red; feet black; irides yellow or orange-yellow" (D'Albertis). Total length 14.8 inches, wing 7.7, tail 8.3, bill 0.81, tarsus 0.8.

Female. Green; abdomen red; rump and upper tail-coverts bright blue; front neck and breast olive-green, with the edges of the feathers red; tail above blue-black; under wing-coverts green: "bill black, base of the upper mandible red" (D'Albertis).

Hab. Central New Guinea, along the Fly River, and also the

northern coast between long. 136° 30′ and 137° E. (Meyer).

# 4. Aprosmictus amboinensis.

Psittaca amboinensis coccinea, Briss. Orn. iv. p. 378, t. 28. f. 2

(1760).

Psittacus amboinensis, Linn. S. N. i. p. 141, n. 9 (1766); Bodd. Tabl. Pl. Enl. p. 14 (1783); Gm. S. N. i. p. 316 (1788); Lath. Ind. Orn. i. p. 86 (1790); Shaw, Gen. Zool. viii. p. 407, var. (1811); Bechst. Kurze Uchers. p. 67 (1811); Vieill. Enc. Méth. p. 1382 (1823); *Temm. Tabl. Méth.* p. 60 (1839). Perruche rouge d'Amboine, *D'Aubent. Pl. Enl.* 240.

Leri Perruche tricolor, Buff. Hist. Nat. Ois. vi. p. 138 (1779).

Amboina red Parrot, Lath. Syn. i. p. 210 (1781); id. Gen. Hist. ii.

p. 118 (1822).

Platycercus amboinensis, Wayl. Mon. Psitt. p. 539 (1832); G. R. Gr. Gen. B. ii. p. 408, n. 26 (1846); Wall. Ibis, 1860, p. 306, 1861, p. 285; id. P. Z. S. 1864, p. 282 (partim); Schley. Mus. P.-B. Psittaci, p. 90 (partim) (1864); Finsch, Neu-Guin. p. 156 (partim) (1865); Schley, Ned, Tijdschr. Dierk. iii. p. 184 (partim)

(1866); Finsch, Papag. ii. p. 249 (partim) (1868); G. R. Gr. Hand-list, ii. p. 139, n. 8014 (partim) (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 37 (partim) (1874); Gieb. Thes. Orn. iii. p. 215 (partim) (1876); Rehnw. Journ. f. Orn. 1881, p. 128 (Consp. Psitt. p. 64); id. Vogelbild. Nachtr. 16 (1883).

Aprosmictus amboinensis, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 165; id. Naumannia, 1856, Consp. Psitt. n. 163; Bolle, Journ. f. Orn. 1856, p. 171; Wall. Ibis, 1861, p. 311; Rosenb. Journ. f. Orn. 1862, p. 61; Salvad. Orn. Pap. e Mol. i. p. 137 (1880); id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 159 (1889).

Adult male. Head, neck, and all the under surface carmine-red; under tail-coverts blue on the hidden bases; back, scapulars, rump, upper tail-coverts, under wing-coverts, and edge of the wing deep blue; wings green; tail black-blue, underneath black; inner web of the two or three outer tail-feathers broadly edged with rosy red: irides yellow; bill black, with the base of the upper mandible red; feet blackish. Total length 17.7 inches, wing 8.2, tail 9, bill 0.95, tarsus 0.8.

Young. Interscapular feathers green, edged with blue.

Hab. Amboyna and Ceram.

a. 3 ad. sk.
b. Ad. sk.
c. Imm. sk.
d. Ceram.
d. A. R. Wallace, Esq. [C.].
Gould Coll.
H. O. Forbes, Esq. [C.].

# 5. Aprosmictus buruensis.

Aprosmictus sp., Rosenb. Journ. f. Orn. 1862, p. 61 (Bouru).
Aprosmictus amboinensis, Wall. (nec Linn.) P. Z. S. 1863, p. 21.
Platycercus amboinensis, part., Wall. P. Z. S. 1864, pp. 282, 293;
Schleg. Mus. P.-B. Psittaci, p. 90 (partim, specim. from Bouru)
(1864); Finsch, Neu-Guin. p. 156 (partim) (1865); Schleg. Ned.
Tijdschr. Dierk. iii. sp. 184 (partim) (1866); Finsch, Papag,
ii. p. 249 (partim) (1868); G. R. Gr. Hand-list, ii. p. 137,
n. 8014 (1870); Schleg. Mus. P.-B. Psittaci, Reeue, p. 37

(partim) (1874); Gieb. Thes. Orn. iii. p. 215 (partim) (1876). Aprosmictus buruensis, Salvad. Ann. Mus. Civ. Gen. viii. p. 371 (1876), x. p. 27, n. 19 (1877); id. Orn. Pap. e Mol. i. p. 138 (1880).

Platycercus buruensis, Rehme. Journ. f. Orn. 1881, p. 129 (Consp. Psitt. p. 65); id. Vogelbild. Nachtr. 16 (1883).

Similar to A. amboinensis, but the bill is either entirely black, or black with the tip of the upper mandible reddish. Total length 17.7 to 16.9 inches, wing 8.2, tail 9.4 to 9.1, bill 0.92 to 0.89, tarsus 0.88.

Hab, Bouru.

It seems that in this species the interscapular region is always green with the edges of the feathers blue.

a. ♀ ad. sk. Cajeli, Bouru, Nov. H. O. Forbes, Esq. [C.].

### 6. Aprosmictus dorsalis.

Psittacus (Platycercus) dorsalis, Quoy et Gaim. Voy. Astrol., Zool. i. p. 234, pl. 21. f. 3 (1830) (type examined).

Platycercus tabuensis, Less. (nec Gm.) Tr. d'Orn. p. 207 (1831)

(ex Nova Guinea).

? Conurus dorso-cæruleus, Bourj. Perr. pl. 41 (1837-38) (ex Nova

Guinea).

Platycercus dorsalis, Less. Compl. de Buff. 2nd ed., Ois. p. 611 (1838); G. R. Gr. P. Z. S. 1858, p. 194; id. Cat. B. New Guin. p. 59 (1859); id. P. Z. S. 1861, p. 436; Bernst, Nat. Tijdschr. Ned. Ind. xxvii. p. 297 (1864); Wall. P. Z. S. 1864, p. 282; Schleg. Mus. P.-B. Psittaci, p. 91 (1864); Finsch, Neu-Guin. p. 156 (1865); Schleg. Ned. Tijdschr. Dierk. iii. p. 184 (1866); G. R. Gr. Hand-list, ii. p. 139, n. 8012 (1870); Meyer, Sitzb. Isis zu Dresd. 1875, p. 76; Rosenb. Reist. nuar Geelvinkb. p. 83 (1875); Cab. u. Rehnw. Journ. f. Orn. 1876, p. 324, n. 71; Rehnw. Journ. f. Orn. 1881, p. 129 (Consp. Psitt. p. 65); id. Vogeld en Valkenk. 1982, 107

Psittacus dorsalis, S. Müll. Verh. Land- en Volkenk. pp. 22, 107

(1839-44).

Aprosmictus amboinensis, Sclat. (nec Linn.) Journ. Pr. Linn. Soc.

ii. p. 164, n. 102 (1858).

Platycercus amboinensis, G. R. Gr. (nec Linn.) Cat. B. New Guin. p. 38 (1859); id. P. Z. S. 1859, p. 158; id. List Psitt. Brit. Mus. p. 10 (1859) (ex Nova Guinea); Finsch, Papag. ii. p. 249

(1868).

Aprosmictus dorsalis, Selat. P. Z. S. 1860, p. 227; Wall. Ibis, 1861, p. 311; Rosenb. Journ. f. Orn. 1862, pp. 63, 64, 67; id. Nat. Tijdschr. Ned. Ind. xxv. pp. 143, 222 (1863); id. Journ. f. Orn. 1864, p. 112, n. 1; Sclat. Ibis, 1874, p. 418; Salvad. Ann. Mus. Civ. Gen. vii. p. 754 (1875), x. p. 27, n. 20, p. 119 (1877); id. Orn. Pap. e. Mol. i. p. 140 (1880), iii. p. 515 (1882); Nehrk. Journ. f. Orn. 1885, p. 31; Guillem. P. Z. S. 1885, p. 619; Meyer, Vogel-Skelett. t. 1xvi. (1879-88); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 159 (1889).

Adult. Very similar to A. amboinensis, but much smaller, and with no red edges on the inner webs of the lateral tail-feathers; the carmine-red colour of the head, neck, and under surface somewhat deeper; bill black, base of the upper mandible red; feet blackish. Total length 15.7 to 4.9 inches, wing 7.5 to 7.1, tail 7.5 to 7.3, bill 0.9, tarsus 0.65.

Female and Young. Have the interscapular region green, with the feathers more or less edged with blue; tail-feathers tipped

with red.

Hab. North-western New Guinea and the surrounding western Papuan Islands—Salawatty, Batanta, Waigiou, and Ghemien.

a. Ad. st. New Guinea.
 b. Ad. sk.
 c, d, e. ♀ ad. et Dorey.
 juv. sk. \*
 Dorey.
 Baron Laugier's Coll.
 A. R. Wallace, Esq. [C.].
 A. R. Wallace, Esq. [C.].

<sup>\*</sup> This young specimen has the bill entirely reddish, like the Sula birds.

f, g, h. Ad. et New Guinea. imm. sk. i. Ad. sk. New Guinea (A. R. Wallace). k. Juv. sk. New Guinea. l. Juv. sk. Waigiou (A. R. Wallace).

A. R. Wallace, Esq. [C.] Tweeddale Coll. Purchased. Gould Coll.

## 7. Aprosmictus sulaensis.

Platycercus dorsalis, var., Wall. P. Z. S. 1862, pp. 335, 337 (partim,

Sula Isl. only), 1864, pp. 282, 293 (partim).

Aprosmictus sulaensis, Rchnw. Journ. f. Orn. 1881, p. 128 (Consp. Psitt. p. 64), 1882, p. 118; Salvad. Orn. Pap. e Mol. iii. p. 515 (1882).

"This bird agrees with my specimens from New Guinea, but the bill in those is black, with a red spot at the base only, near the nostrils; in this variety the bill seems all reddish, except a pale tip and dusky portion at the sides of the upper mandible" (Wal-Total length 14 inches, wing 7, tail 7.4, bill 0.82, tarsus lace). 0.65.

Young. Breast dull green, with the feathers broadly edged with red; interscapular region green, with no blue edges to the feathers. *Hab.* Sula Islands.

Out of eight specimens contained in the British Museum, not one has the interscapular region blue as in the adult A. dorsalis; three have the interscapular region entirely green, and these I take to be young birds; while the other five have some feathers of the interseapular region edged with blue. I suspect that in the fully adult birds the interscapular region never becomes entirely blue.

a-h. Ad. (?) et imm. sk.

Sula Islands.

A. R. Wallace, Esq. [C.].

# 8. Aprosmictus hypophonius.

Psittacus (Platycercus) hypophonius, S. Mill. Verh. Land- en Volkenk. p. 181 (1839–44).

Platycercus hypophonicus, G. R. Gr. Gen. B. ii. p. 408, n. 27 (1846). Aprosmictus hypophonicus, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 166; id. Naumannia, 1856, Consp. Psitt, n. 166.

n. 100; va. Naumanna, 1850, Consp. Psttt. n. 106.
Platycercus hypophonius, G. R. Gr. List Psitt. Brit. Mus. p. 11
(1859); id. P. Z. S. 1800, p. 356; Wall. P. Z. S. 1864, pp. 282,
293; Schleg. Mus. P.-B., Psittaci, p. 91 (1864); Finsch, NeuGuin. p. 156 (1863); id. Papag. ii. p. 254 (1868); G. R. Gr.
Hand-list, ii. p. 139, n. 8313 (1870); Schleg. Mus. P.-B., Psittaci,
Revue, p. 38 (1874); Gieb. Thes. Orn. iii. p. 217 (1876); Rehnw.
Journ. f. Orn. 1881, p. 130 (Consp. Psitt. p. 66); id. Vogelbild.
Nachtr. 16 (1883).

Aprosmictus hypophonius, Sclat. P. Z. S. 1860, p. 227; Rosenb. Journ. f. Orn. 1862, p. 62; id. Nat. Tijdschr. Ned. Ind. xxv. p. 142 (1863); Salvad. Ann. Mus. Civ. Gen. vii. p. 755 (1875), x. p. 27, n. 21 (1877); id. Orn. Pap. e Mol. i. p. 143 (1880); id. Mem. R.

Ac. Sc. Tor. ser. 2, xl. p. 159 (1889).

Adult male. Head, neck, and under surface crimson-red; back, upper tail-coverts, wings, and tail above deep blue, the cubital wingcoverts brighter; quills and tail underneath black: bill black, with the base of the upper mandible red; feet blackish. Total length 15·3 inches, wing 7·6, tail 7·5, bill 0·86, tarsus 0·7.

Adult female. Perhaps like the male, only smaller.

Young. Feathers of the sides and of the interscapular region edged with olive-green; tail-feathers tipped with red; bill red.

Hab. Halmahera.

*a-d*. Ad. et imm. sk. *e*. Imm. sk.

Halmahera. Halmahera. A.R. Wallace, Esq. [C.]. Tweeddale Coll.

#### 39. PYRRHULOPSIS \*.

Pyrrhulopsis, Rehnb. Åv. Syst. Nat. tab. lxxxii. (1850).
Prosopeia, Bp. Rev. et Mag de Zool. 1854, p. 153 . . . .
Prosopea, Bp. Naumannia, 1856, Consp. Psitt. gen. 37.

Range. Fiji Islands, and also Tonga Islands, where at least one species has been introduced.

### Key to the Species.

## 1. Pyrrhulopsis splendens.

? Tabuan Parrot, Lath. Gen. Hist. ii. p. 116 (♀ ex Ins. Feejee) (1822).

Platycercus splendens, Peale, U.S. Expl. Exped. p. 127, pl. 34, f. 1 (1848); Hartl. Wiegm. Archiv, 1852, pp. 105, 132; id. Journ. f. Orn. 1854, p. 168; G. R. Gr. List Psitt. Brit. Mus. p. 12 (1859); id. List B. Trop. Isl. p. 30 (1859); Schleg. Dierent. p. 73 (1864); Hartl. Ibis, 1864, p. 232; Sclat. P. Z. S. 1866, p. 203; Finsch u. Hartl. Faun. Centr.-Polyn. pp. 20, 275, t. ii. f. 2 (egg) (1867); Finsch, Papag. ii. p. 237 (1868); Finsch u. Hartl. Journ. f. Orn. 1870, p. 124; Gräffe, Journ. f. Orn. 1870, pp. 402, 417, 418; E. L. Layard, P. Z. S. 1875, pp. 30, 425 (part.); Salvin, Ibis, 1876, p. 143 (note); E. L. Layard, ibid. pp. 143, 390, 391; id. P. Z. S. 1876, p. 501; Gieb. Thes. Orn. iii. p. 219 (1877); Finsch, P. Z. S. 1877, p. 728; Nehrk. Journ. f. Orn. 1879, p. 394 (egg); Moseley, Not. Challeng. pp. 304, 322, 324 (1879); Rehnw. Vogelbild. t. xvi.

<sup>\*</sup> In Pyrrhutopsis splendens the furcula is complete (Garrod, P. Z. S. 1878, p. 590); I have found it complete also in P. tabuensis.

f. 4 (1878-83); id. Journ, f. Orn. 1881, p. 131 (Consp. Psitt. p. 62); Finsch, Voy. Challeng., Birds, p. 41 (1881).

Aprosmictus splendens, Souancé, Rev. et Mag. de Zool. 1856, p. 211; Bp. Naumannia, 1856, Consp. Psitt. n. 167; Cass. U.S. Expl. Exp.,

Mamm. & Orn. p. 287, pl. xx. f. 1 (1858).

Pyrrhulepsis splendens, Sclat. P. Z. S. 1864, pp. 158, 375; G. R. Gr. Hand-list, ii. p. 139, n. 8016 (1870); Sclat. P. Z. S. 1873, p. 683; Gavrod, P. Z. S. 1874, p. 587; Whitmee, Ibis, 1875, p. 436; Sclat. P. Z. S. 1876, p. 308; Forbes, P. Z. S. 1879, p. 169; Gavrod, Coll. Sc. Pap. p. 248 (1881); Sclat. List Vert. An. 8th ed. p. 335 (1883); Tristr. Cat. Coll. B. p. 78 (1889).

Platycercus tabuensis (part.), Schleg. Mus. P.-B., Psittaci, p. 89 (ind.

n. 2) (1864); id. op. cit. Revue, p. 36 (part.) (1874).

Adult male. Head and all the under surface crimson; across the nape a blue band; back, rump, upper tail-coverts, and wings green; primaries and their coverts blue, the outermost secondaries also blue, the next ones green, tinged with blue along the middle; under wing-coverts bluish green; tail above blue, with a green tinge towards the base, especially of the central tail-feathers; quills and tail underneath black: "irides orange; bill and feet black" (Layard). Total length about 18 inches, wing 9.3, tail 8.5, bill 1·18, tarsus 0·92.

Adult female. Like the male, only smaller.

Young. Like the adult bird in colouring: the bill apparently horny brown.

Hab. Fiji Islands: Viti Levu and Kandavu.

Some specimens show the feathers of the rump edged with cherry-red.

Fiji Islands. a, b. Ad. sk. Purchased. M'bau, Fiji, August (J. c. ∂ ad. sk. Tweeddale Coll. Brenchley). d, e. Ad. et juv. M'bau, Fiji, August. J. Brenchley, Esq.  $\lceil P. \rceil$ . sk. 'Challenger' Exped. f-i.  $\beta \supseteq ad. sk$ . Kandavu. Kandavu, August (E. L. Tweeddale Coll. k. dad.sk. [var.]. Layard). Kandavu, April, August (E. L. Layard). Tweeddale Coll.  $l, m, n, \beta \subseteq ad.$ sk. o, p. ♀ ad. sk. Rewa river, March, June Tweeddale Coll. (E. L. Layard), q. ♂ ad. sk. Rewa river, June. E. L. Layard, Esq. [C.].

# 2. Pyrrhulopsis tabuensis.

Tabuan Parrot, Lath. Gen. Syn. i. p. 214, n. 16, pl. 7 (1781) (Tonga

Talboo); id. Gen. Hist. ii. p. 115 (part.), pl. 22 (1822).
Psittaeus talucusis, Gm. S. N. i. p. 317, n. 56 (1788); Lath. Ind. Orn. i. p. 88, n. 19 (sine var. β) (1790); Bechst. Kurze Uebers. i. p. 986, pl. 9 (1811); Vieill. N. D. xxv. p. 340 (part.) (1817); F. Kuhl, Consp. Psitt. p. 57 (1820); Vieill. Enc. Méth. iii. p. 1882 (part.) pl. 221 f. 4 (1823); Vieitl. Con. Uebers. p. 731 (1831) (part.), pl. 221, f. 4 (1823); Voigt, Cur. Uebers, p. 731 (1831).

Psittacus atroj urpureus, Shaw, Mus. Lever. p. 140 (with pl.) (1792);

id. Gen. Zool. viii. 2, p. 409 (1811).

Platycercus tabuensis, Vig. Zool. Journ. i. p. 529 (1825), ii. p. 549 (1826), iii. p. 245 (1827); Lear, Parr. pl. 16 (1832); Gould, Syn. B. Austr. pl. — f. 2 (head) (18—?); G. R. Gr. Gen. B. ii. p. 408, n. 28 (syn. emend.) (1846); Mitch. P. Z. S. 1849, p. 14 (Feejee Isl.); Pelz. Sitzb. k. Ak. Wiss. Wien, xx. p. 166 (1856); G. R. Gr. List Psitt. Brit. Mns. p. 11 (partim) (1859); id. List B. Trop. Isl. p. 30 (partim) (1859); Schleg. Dierent. p. 73 (1864); id. Mus. P.-B. Psittaci, p. 88 (1864); Finsch u. Havtl. Faun. Centr.-Polyn. p. 17 (partim) (1867); Finsch p. Papeg. ii. p. 231 (part.) (1868); Finsch & Hartl. P. Z. S. 1869, p. 545 (Tonga) (partim?); iid. Journ. f. Orn. 1870, p. 123 (syn. excl.); Gräffe, Journ. f. Orn. 1870, pp. 416, 417; Pelz. Ibis, 1873, p. 30; Schleg. Mns. P.-B. Psittaci, Revue, p. 36 (ind. n. 1) (1874); E. L. Layard, Ibis, 1875, p. 425; Salvin, Ibis, 1876, p. 143 (note); E. L. Layard, Ibis, 1876, pp. 143, 390, 391; id. P. Z. S. 1876, p. 500; Finsch, P. Z. S. 1877, pp. 729, 771; Gieb. Thes. Orn. iii. p. 220 (part.) (1877); Nehrk. Journ. f. Orn. 1879, p. 394 (egg.); Moseley, Not. Chall. p. 292 (1879); Rehmu. Journ. f. Orn. 1881, p. 131 (Consp. Psitt. p. 67); Pelz. u. Lor. Ann. k. naturh. Hofmus. 1888, p. 38.
Platycerus atrogularis, Peale, U.S. Expl. Exp., p. 129, pl. 35 (1848);

Platycercus atrogularis, Peale, Ü.S. Expl. Exp. p. 129, pl. 35 (1848);
 Hartl. Wiegm. Archiv, 1852, pp. 106, 132; id. Journ. f. Orn. 1854,
 p. 168; Finsch u. Hartl. Journ. f. Orn. 1870, p. 123.

Platycercus ama, Gough (nec Bourj.), P. Z. S. 1849, p. 14; G. R. Gr.

List Psitt, Brit. Mus. p. 11 (1859).

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Aprosmictus tabuensis, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 164; id. Naumannia, 1856, Consp. Psitt. n. 165; Cass. U.S. Expl. Exp., Mamm. & Orn. p. 234 (1858).

Aprosmictus atrogularis, Souancé, Rev. et Mag. de Zool. 1856, p. 211; Bp. Naumannia, 1856, Consp. Psitt. n. 168.

Pyrrhulopsis atrigularis, Sclut. P. Z. S. 1864, p. 158 (Ngau), 1876,

pp. 307, 308. Pyrrhulopsis tabuensis, Sclat. P. Z. S. 1864, p. 158; G. R. Gr. Handlist, ii. p. 139, n. 8018 (1870); Sclat. P. Z. S. 1873, p. 683, 1875, p. 62,

1876, pp. 307, 308; id. List Vert. Au. 8th ed. p. 334 (1883); Trist. Cat. Coll. B. p. 78 (1889).

Platycercus (?) leari, *Bp.*, *fide G. R. Gr. Hand-list*, ii. p. 139 (1870).

Adult male. Head, neck, and underparts dark cherry-red, face darker; a broad blue band across the nape; back, rump, upper tail-coverts, and wings green; primaries and their coverts blue; under wing-coverts green; tail above blue, base of the central feathers and of the outer webs of the lateral ones tinged with green: "irides orange; bill and feet black" (Layard). Total length 17 inches, wing 10, tail 9, bill 1·3, tarsus 0·98.

Female. Like the male, only smaller.

Hab. Fiji Islands—Vanua Levu; and introduced into Eooa (Tonga Islands) from Fiji.

a. Ad. st.	Fiji Islands.	Lieut.F.W.Gough [P.].
b. Ad. sk.	Fiji Islands.	A. B. Gordon, Esq. P.
c. [♂] ad. sk.	Vänua Levu, October (T. Kleinschmidt).	Tweeddale Coll.
d. ♂ ad. sk.	Ngau Isl., Fiji, October (F. M. Rayner).	Voyage of II.M.S. 'Herald.'
e. ♀ ad. sk.	Bua, Fiji, May (E. L.	Tweeddale Coll.

f. & ad. sk. Eooa, Tonga Isl., February Tweeddale Coll. (E. L. Layard).

g. Skeleton (incomplete).

### 3. Pyrrhulopsis koroensis.

? Psittacus hysginus, Forst. MS.; id. Icon. ined. t. 42; id. (Licht. ed.)

Descr. An. p. 159 (Eaoowe) (1844).

Platycercus hysginus, Wagl. Mon. Psitt. p. 540 (syn. emend.) (1832); Hartl. Wiegm. Archiv, 1852, pp. 106, 132; id. Journ. f. Orn. 1854, p. 169; G. R. Gr. List B. Trop. Isl. p. 30 (syn. emend.) (1859); Salvin, Ibis, 1876, p. 143 (note); Rchnw. Vogelbild. in the text of pl. xvi. f. 1 (1878-83); id. Journ. f. Orn. 1881, p. 132 (Consp. Psitt. p. 68).

? Conurus anna, Bourj. Perr. pl. 38 (1837-38).

Psittacus caledonicus, Licht. (nec Gm.) in Forst. Descr. An. p. 159

(note) (1844).

Platycercus tabuensis (part.), G. R. Gr. Gen. B. ii. p. 408, n. 28 (1846); Hartl. u. Finsch, Faun. Centr.-Polyn. p. 17 (part.) (1867); Finsch, Papag. ii. p. 23 (part.) (1868); Gieb. Thes. Orn. iii. p. 220 (part.) (1877).

? Aprosmictus anna, Cass. U.S. Expl. Exp., Mamm. & Orn. p. 236

(1856) (Fiji Isl.).

Pyrrhulopsis anna, Sclat. P. Z. S. 1864, p. 158.

Pyrrhulopsis hysginus (part.), G. R. Gr. Hand-list, ii. p. 139, n. 8017 (1870).

Platycercus koroensis, Layard, Ibis, 1876, pp. 143, 391, 394.

Adult male (type). Similar to *P. tabuensis*, but it has a narrow blue collar, scarcely observable without particular attention; rumpfeathers edged and tipped with dark cherry-red, of the same shade as the inferior parts of the body: "irides red; bill and feet black" (*Layard*). Total length 17.5 inches, wing 9.5, tail 8.3, bill 1.38, tarsus 0.98.

Adult female (type). Similar to the male, only smaller. Total length 16.5 inches, wing 8.5, tail 7.5, bill 1.12, tarsus 0.91.

Hab. Koro, Fiji Islands.

I have only seen the two typical specimens of *Platycercus koroensis*, Layard, one of which is now in the British Museum. Both have the rump-feathers edged with dark cherry-red, and it is quite possible that this character, which is accidental in the other allied

species, may be constant in the Koro birds.

It seems to me very doubtful whether *Psittacus hysginus*, Forst., is this species, especially as it was described from Eaoowe (Tonga Islands). *Conurus anna*, Bourj., the type of which is in the Philadelphia Museum, has been identified by Cassin, and seems to be the same as *P. koroensis*, although the dimensions do not agree; for this reason I have preferred using Layard's name till a further examination of Bourjot's type can be made.

 $a. \ \$  ad. sk.

Koro, Fiji Islands, Sept (E. L. Layard).

H. Seebohm, Esq. [P.]. (Type of species.)

### 4. Pyrrhulopsis taviunensis.

? Platycercus tabuensis, Jard. & Selb. (nec Gm.) Ill. of Orn. ii. pl. 74 (1839); Finsch, Papag. ii. p. 231 (part.) (1868).

Pyrrhulopsis hysginus (part.), G. R. Gr. Hand-list, ii. p. 139, n. 8017

(1870).

Platycercus splendens (part.), Layard, P. Z. S. 1875, p. 425 (Taviuni). Pyrrhulopsis taviunensis, Layard, apud Sclat. P. Z. S. (March) 1876, pp. 307, 308.

Platycercus taviunensis, Layard, Ibis, (October) 1876, pp. 141, 391

(Taviuni); Finsch, P. Z. S. 1877, p. 729.

Platycercus annæ (part.), Finsch, P. Z. S. 1877, pp. 729, 772; id. Voy. Chall., Birds, p. 42 (1881).

Platycercus anna, Rehnw. (nec Bourj.) Journ. f. Orn. 1881, p. 132 (Consp. Psitt. p. 68). Platycercus tabuensis, Rchnw. Vogelbild. t. xvi. f. 1 (1878-83).

Platycercus taviuensis, Rchnw. Vogelbild. in the text of pl. xvi. f. 1 (1878-83).

Pyrrhulopsis hysgina, Tristr. Cat. Coll. B. p. 78 (Taviuni) (1889).

Adult male (type). Similar to P. tubuensis and P. koroensis, but smaller, and with no blue collar on the nape: "irides red; bill and feet black" (Layard). Total length 15.5 inches, wing 8.2, tail 7.5, bill 1.8, tarsus 0.88.

Adult female (type). Similar to the male, but smaller. Total length 14.5 inches, wing 7.7, tail 6.5, bill 1, tarsus 0.82.

Hab. Taviuni, Fiji Islands.

One of the three typical birds, now in Mr. Seebohm's collection, has a few feathers of the rump edged with dark cherryred.

N'gila, Taviuni (E. L. Tweeddale Coll. Layard). N'gila, Taviuni, Aug.  $c. \ \$ 2 ad. sk. E. L. Layard [C.]. d. Ad. sk. Taviuni. W. A. Bailward [P.].

# 5. Pyrrhulopsis personata.

Coracopsis? personata, G. R. Gr. P. Z. S. 1848, p. 21, pl. 3; id. Gen. B. iii. App. p. 19 (1849); Bp. Compt. Rend. xxx. p. 138 (1850); Souancé, Rev. et Mag. de Zool. 1856, p. 210.

Platycercus splendens, juv., Peale, U.S. Expl. Exp. p. 128, pl. 34. f. 4

(1848).

Prosopeia personata, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 159. Prosopæa personata, Bp. Naumannia, 1856, Consp. Psitt. n. 160. Aprosmictus personatus, Cass. U.S. Expl. Exp., Mamm. & Orn. p. 238,

pl. xx. f. 2 (1858).

Platycercus personatus, G. R. Gr. List Psitt. Brit. Mus. p. 11 (1859); id. List B. Trop. Isl. p. 30 (1850); Hartl. Ibis, 1862, p. 232; Finsch u. Hartl. Faun. Centr.-Polyn. pp. 21, 275 (1867); Finsch, Papag. ii. p. 239 (1868); Finsch u. Hartl. Journ. f. Orn. 1870, p. 124; Schley, Mus. P.-B. Psittaci, Revue, p. 36 (1874); Layard, P. Z. S. 1875, pp. 30, 425; id. Ibis, 1876, pp. 143, 391 (Viti Levu); Gieb. Thes. Orn. iii. p. 219 (1877); Finsch, P. Z. S. 1877, p. 729; Nehrk. Journ. f. Orn. 1879, p. 394 (egg); Finsch, Voy. Chall., Birds, p. 42

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(1881); Rehnw. Vogelbild, t. xvi. f. 5 (1878-83); id. Journ. f. Orn.

1881, p. 132 (Consp. Psitt. p. 68).

Pyrrhulopsis personata, Selat. P. Z. S. 1862, pp. 141, 185, 1864, p. 158; G. R. Gr. Hand-list, ii. p. 139, n. 8015 (1870); Selat. P. Z. S. 1873, p. 683, 1875, p. 62, 1876, p. 308; Forbes, P. Z. S. 1879, p. 169; Selat. List Vert. An. 8th ed. p. 335 (1883); Tristr. Cat. Coll. B. p. 78 (1889).

Adult. Green; face black; middle of the breast yellow, middle of the abdomen orange; primaries and their coverts blue; tail green, with a bluish tinge towards the tip; quills and tail-feathers underneath black: "bill black; feet dusky; irides orange-yellow" (Peale). Total length about 18 inches, wing 9.5, tail 8.5, bill 1.25, tarsus 0.87.

Female. Like the male, only smaller.

Young. Exactly like the afult birds in colouring: "irides dark brown; bill horny, with yellow edges; feet black" (Layard).

Hab. Fiji Islands.

<ul><li>a. Ad. st.</li><li>b. Ad. sk.</li></ul>	Fiji Islands. Fiji Islands.	Zool. Soe. Coll. Gould Coll.
c. Ad. sk.	Viti Levu, Fiji, Sept. (F. M. Rayner).	Voyage of II.M.S. 'Herald.'
d. Ad. sk.	Kandavn, August (E. L. Layard).	Tweeddale Coll.
e, f. ∂ad. et juv. sk.	Rewa, July, Sept. (E. L. Layard).	Tweeddale Coll.
g. Ad. sk.	Siva, Fiji, October.	Voyage of H.M.S.
h, i. Ad. et juv.		J. Brenchley, Esq. [P.].
k. $Q$ ad. $sk$ .	Levuka.	Challenger Exped.

#### 40. PSITTACELLA.

Type.
Psittacella, Schleg. Ned. Tijdschr. Dierk. iv. p. 35 (1871).
P. brehmi.
Range. Confined to New Guinea.

### Key to the Species.

a. Back, rump, and upper tail-coverts with crescentlike black bands
b. Only the rump with crescent-like blackish bands.
a'. Hind neck olive-brown, like the breast
b'. Hind neck olive-brown, with the middle of the feathers ochreous-yellow; breast green, with no brown tinge
madaraszi, p. 500.

#### 1. Psittacella brehmi.

Psittacus brehmii, Rosenb. in litt.; Schleg. Ned. Tijdschr. Dierk. iv. p. 35 (1871); Rosenb. Reist. naar Geelvinkb. pp. 102, 114 (1875). Psittacella brehmii, Schleg. Ned. Tijdschr. Dierk. iv. p. 35 (\$\rightarrow\$) (1871); Sharpe, Zool. Rec. viii. p. 52 (1873); Meyer, Journ. f. Orn. 1874, p. 74; id. Sitzb. k. Ak. Wissensch. Wien, lxix. p. 74

(1874); Schleg. Mus. P.-B. Psittaci, Revue, p. 42 (1874); Rosenb. Reist, naar Geelvinkb. p. 136 (1875); Meyer, Sitzb. Isis zu Dresd. 1875, p. 77; Salvad. Ann. Mus. Civ. Gen. vii. p. 755 (1875); Gould, Birds New Guin. pt. iv. pl. 4 (1877); Salvad. Ann. Mus. Civ. Gen. x. p. 27, n. 22 (1877); Rosenb. Malay. Archip. pp. 559, 592 (1878–79); Salvad. Orn. Pap. e Mol. i. p. 145 (1880); Rehnw. Journ. f. Orn. 1881, p. 135 (Consp. Psitt. p. 71); id. Vogelbild. t. xxiii. f. 2 (1878–83); Guillem. P. Z. S. 1885, p. 619; Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 159 (1889). Euphema brehmi, Gieb. Thes. Orn. iii. p. 325 (1876).

Psittacula (sic) brehmii, Oust. Bull. Soc. Philom. 1877, p. 55. Psittacella pallida, Meyer, Zeitschr. f. ges. Orn. 1886, p. 3; Sharpe, Nature, vol. 34, p. 340 (1866); Salvad. Mem. R. Ac. Sc. Tor. (2) xl. p. 159 (1889).

Adult male. Green; head and throat brown-olive, back, rump, and upper tail-coverts with numerous black crescent-like bars; rump and upper tail-coverts washed with yellow; on each side of the neck a crescent-like band, bright yellow; breast and abdomen green; under tail-coverts red; wings green, with the metacarpal edge blue; quills towards the tip brown, with a narrow yellowish edge on the outer web, underneath brown; tail above green, the tips of the feathers with narrow yellow edges, tail underneath brown or dull olive: bill lead-grey, with the tip whitish; feet brown. Total length 10:2 inches, wing 4:8, tail 3:5, bill 0:8, tarsus 0.66.

Female. Similar to the male, but smaller, and with no yellow crescent-like bands on the sides of the neck; breast yellow, with numerous crescent-like black bands.

Hab. Arfak Mountains, New Guinea.

I have compared females from S.E. New Guinea, which have been described by Dr. A. B. Meyer as belonging to a distinct species, with others from the Arfak Mountains, and I have not been able to detect any difference.

a. ∂ ad. sk. Arfak Mts., New Guinea. Tweeddale Coll.  $b, e, \beta \subsetneq ad. sk.$ Arfak Mts., Febr. Purchased. New Guinea. Dr. A. B. Meyer [C.]. d. ♀ ad. sk. e. ♀ ad. sk. New Guinea. Purchased. f. ? ? ad. sk. Meroka (5000 feet), S.E. New H. O. Forbes, Esq. [C.]. Guinea. g. ♀? ad. sk. S.E. New Guinea. H.O. Forbes, Esq. [C.].

#### 2. Psittacella modesta.

Psittacus modestus, Rosenb. in litt.; Schley. Ned. Tijdschr. Dierk. iv. p. 36 (1871); Rosenb. Reist. naar Geelvinkb. pp. 102, 114 (1875).

Psittacella modesta, Schley. Ned. Tijdschr. Dierk. iv. p. 36 (3) (1871); Sharpe, Zool. Record, viii. p. 52 (1873); Meyer, Journ. f. Orn. 1874, p. 75; id. Sitzb. k. Ak. Wissensch. Wien, lxix. p. 74 (1874); Schley. Mus. P.-B. Psittaci, Revue, p. 42 (1874); Rosenb. Reist, naar Geelvinkb. p. 136 (1875); Meyer, Sitzb. Isis Dresd. 1875, p. 77; Salvad. Ann. Mus. Civ. Gen. x. p. 27, n. 23 (1877);  $2 \times 2$ 

Rosenb. Malay. Archip. pp. 559, 592 (1878-79); Salvad. Orn. Pap. e Mol. i. p. 147 (1880); Rehnw. Journ. f. Orn. 1881, p. 135 (Consp. Psitt. p. 71); id. Vogelbild. in the text of pl. xxxiii. (1878-83); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 160 (1889). Euphema modesta, Gieb. Thes. Orn. iii. p. 325 (1876).

Adult male. Green; head brown-olive, crown darker; hind neck olive; rump green, slightly tinged with yellowish and crossed by blackish bars, not very conspicuous; breast olive-brown; abdomen yellowish green; under tail-coverts red; quills brown, green on their outer webs, and narrowly edged with yellowish towards the tip; inner web of the quills underneath tinged dull yellowish; under wing-coverts olive, edge of the wing blue; tail above green, below brown: irides lemon-yellow; bill greyish blue; feet brown. Total length 6·3 inches, wing 3·4, tail 2·4, bill 0·55, tarsus 0·55.

Female. Like the male, but the breast has dull red and blackish crescent-like bands; on the lower part of the breast and on the

sides the bands are yellow and dark green.

Hab. Arfak Mountains, N.W. of New Guinea.

 $a, b, \beta \supseteq ad. sk.$ 

Arfak Mts. (Bruijn).

Purchased.

### 3. Psittacella madaraszi.

Psittacella madaraszi, Meyer, Zeitschr. f. 1 ges. Orn. 1886, p. 4, t. i. f. 1; Sharpe, Nature, vol. 34, p. 340 (1886); id. Gould's B. New Guin. pt. xxii. pl. 3 (1886); Salvad. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 160 (1889).

Adult male. Very much like that of P. modesta, but the head with an ochreous tinge, the feathers of the hind neck distinctly ochreous-yellow in the middle; the rump more yellowish, and with broader black bands; the breast dull green, with no brown tinge; dimensions very little less than those of P. modesta.

A supposed female of this species has been described by Dr. Meyer as having the head green, the forehead blue; besides, instead of having the breast with reddish and black bars, the bands are on the hind neck. Dr. Meyer thinks that the supposed female may belong to some other species, which seems very likely.

Hab. South-eastern New Guinea.

a. d ad. sk. Owen Stanley Mountains (Hunstein). Purchased.

#### 41. PSITTINUS.

Range. From the middle of Tenasserim, down the Malay Peninsula, to Singapore, Sumatra, Bangka, and Borneo\*.

#### 1. Psittinus incertus.

Petite Perruche de Malacca, Sonn. Voy. Ind. ii. p. 212 (1782). Blue-rumped Parrakeet, Lath. Syn. Suppl. i. p. 66 (1787); id. Gen. Hist. ii. p. 263, with var. A, p. 264 (1822).

Psittacus incertus, Shaw, Nat. Misc. pl. 769 (1790); Kuhl, Consp.

Psitt. p. 68 (1820).

Psittacus malaccensis, Lath. (nec Gm.) Ind. Orn. i. p. 130, n. 144 (1790); Shaw, Gen. Zool. viii. 2, p. 554 (1811); Bechst. Lath. Ueb. p. 83 (1812); Vieill. N. D. xxv. p. 376 (1817); Kuhl, Consp. Psitt. p. 67 (1820); Raftl. Trans. Linn. Soc. xiii. p. 287 (1822); Vieill. Enc. Méth. iii. p. 1407 (1823); Sw. Zool. Ill. iii. pl. 154 (1823); Isis, 1829, p. 1005; S. Müll. & Schley. Verh. Land- en Volkenk, p. 107 (1839-44); Licht, Nomencl. Av. p. 70 (1854).

Psittacus macropterus, Mus. Paris, fide Kuhl, l. c. Blue-green Parrot, Lath. Gen. Hist. ii. p. 278 (1822).

Psittacula malaccensis, Steph. Gen. Zool. xiv. 2, p. 145 (1826); Less. Tr. d'Orn. p. 204 (1831); Wagl. Mon. Psitt. p. 630 (1832); Bourj. Perr. pl. 92 (ad.) (1837–38); Eyt. P. Z. S. 1839, p. 105; Hartl. Syst. Verz. Ges. Mus. p. 88 (1844).

Psittacula incerta, Steph. Gen. Zool. xiv. 2, p. 145 (1826); G. R. Gr. Gen. B. App. p. 30 c, (1849): id. List Psitt. Brit. Mus. p. 91 (1859); Schleg. Mus. P.-B. Psittaci, p. 73 (1864); Finsch, Papag. ii. p. 612 (1868); Schley. Mus. P.-B. Psittaci, Revue, p. 32 (1874); Gieb. Thes. Orn. i. p. 328 (1872); Rosenb. Malay. Archip. p. 108 (1878); Snellem. Sum. Exp., Vogels, p. 32 (1884).

Psittacula reticulata, Less. Tr. d'Orn. p. 204 (1831); G. R. Gr. Gen. B. ii. p. 423, n. 21 (1846); id. List Psitt. Brit. Mus. p. 92 (1859). Psittacus azureus, Temm. in Mus. Lugd.; S. Müll. Verh. Land- en

Volkenk, pp. 377 (note), 381 (1839-44).

Psittinus malaccensis, Blyth, Journ. A. S. B. xi. p. 789 (1842); Bp. Rev. et May. de Zool. 1854, p. 153, n. 33; Souancé, Rev. et Mag. de Zool. 1856, p. 210; Horsf. & Moore, Cat. B. Mus. E. I. Comp. ii. p. 608 (1856-58); Moore, P. Z. S. 1859, p. 432; Blyth, Ibis, 1863, p. 6; Selat. P. Z. S. 1863, p. 208; Sousa, Mus. Nac. Lisboa, Psittaci, p. 16 (1869); Sundev. Meth. nat. Av. disp. Tent. p. 69 (1872); Garrod, P. Z. S. 1874, p. 587; Sclat. List Vert. An. 8th ed. p. 323 (1883).

Agapornis (?) malaccensis, Strickl. P. Z. S. 1846, p. 103.

Tanygnathus malaccensis, Blyth, Cat. B. Mus. A. S. B. p. 3 (1849); id. Journ. A. S. B. xix, p. 235 (1850).

Agapornis azureus, Bp. Consp. Av. i. p. 6 (1850).
Psittinus incertus, Bp. Naumannia, 1856, Consp. Psitt. n. 158; Wall.
P. Z. S. 1864, pp. 283, 293; G. R. Gr. Hand-list, ii. p. 168, n. 8380 (1870); Salvad. Cat. Ucc. Born. p. 25 (1874); Blyth & Wald. B. of Burm. p. 58 (1875); Tweedd. Ibis, 1877, p. 292 (S.E. Sumatra); Hume & Davis. Str. Feath. vi. pp. 120, 500 (1878); Hume, Str. Feath. viii. pp. 51, 87, n. 153 ter. (1879);

<sup>\*</sup> Mr. Oates (B. of Brit. Burm. ii. p. 147) mentions also Cochin China among the localities inhabited by Psittimus incertus: most likely he has taken the information from Dr. Tiraud; but I think that the statement requires to be confirmed.

Cab. Journ. f. Orn. 1879, p. 211; Rehnw. Vogelbild. t. xv. f. 5 (1878-83); id. Journ. f. Orn. 1881, p. 256 (Consp. Psitt. p. 144); Nichols. Ibis, 1882, p. 57; Salvin, Cat. B. Strickl. Coll. p. 458 (1882); Oates, B. of Brit. Burm. ii. p. 147 (1883); Vorderm. Nat. Tijdschr. Ned. Ind. xlvi. p. 224 (1886); Büttik. Not. Leyd. Mus. ix. p. 12 (1886); Salvad. e Gigl. Mem. R. Ac. Sc. Tor. (2) xxxix. p. 101 (1888); Tristr. Cat. Coll. B. p. 76 (1889); Vorderm. Nat. Tijdschr. Ned. Ind. xlix. p. 388 (1889); Everett, Journ. Str. Br. 248 (1889); Everett, Journ. Str. Br. R. As. Soc. 1889, p. 177; Murr. Avif. of Brit. Ind. ii. p. 462 (1890).

Agapornis malaccensis, Rosenb. Journ. f. Orn. 1862, pp. 59, 60; id.

Nat. Tijdschr. Ned. Ind. xxv. pp. 138, 139 (1863).

Psittacula azurea, Schleg, Dierent, p. 67 (1864).
Dichrognathus incertus, Rehmw. Journ. f. Orn. 1881, p. 397 (Consp. Psitt. p. 229); id. Vogelbild. Syst. Verz. n. 264 (1883); Heine & Rehnw. Nomencl. Mus. Hein. Orn. p. 236 (1890).

Adult male. Head and neck grey, tinged with blue, brighter on the forehead and vertex; interscapular region and scapulars blackish with an olive tinge; lower back, uropygium, and upper tail-coverts deep blue; under parts olive-green, washed with bluish grey; vent green, washed with blue; under tail-coverts yellowish green, slightly edged with blue; wings green, the wing-coverts and the last secondaries edged with greenish yellow, a dark red patch along the small upper wing-coverts; bastard-wing green, edged with blue; primary wing-coverts blue; primaries green, the inner webs and underneath black; the inner webs have a narrow yellow edge; metacarpal edge yellow; under wing-coverts and axillaries bright red; central tail-feathers green, the others greenish yellow; tail underneath yellow: "upper mandible orange-vermilion, under mandible dusky or dull reddish brown; legs and feet pale dirty green; eyelids and cere dusky green; it is creamy white" (Davison). Total length 7.5 inches, wing 4.6 to 4.8, tail 2, bill 0.85, tarsus 0.5.

Female. Head and nape reddish brown, sides of the head yellowish, tinged with reddish brown, the shaft of the feathers dusky; back, uropygium, and upper tail-coverts green, a small patch of blue on the lower back; underparts yellowish green, the feathers of the breast darker in the middle so as to produce a scaly appearance; wings and tail as in the male: "upper mandible dusky white, lower mandible dirty white; cere, eyelids, legs, and feet dusky green" (Davison).

Young. Green above, also on the head, a slight tinge of blue on the forehead, lower back with a blue patch; no trace, or scarcely any, of the brown-red patch on the small wing coverts; the underparts are much darker than in the adult females and of a purer

green.

imm. sk.

Hab. The same as that of the genus.

J. D. C. Packman, a. Imm. sk. Tenasserim. Esq. [P.]. b-f.  $\beta \circ \alpha$  ad. et Near Tayov, March, April Hume Coll.

(W. Davison).

$g, h, i, \beta \subsetneq \text{ad. et}$ imm. sk.	Foot of Nwallayboo, April	Hume Coll.
	(W. Davison). Bankasoon, Dec. (W. Davison). Malawoon.	Hume Coll. E. W. Oates, Esq. [C.].
$m$ - $x$ . $\not \subseteq$ ad. et imm. sk.	Malawoon, March, April (W. Davison).	Hume Coll.
$y, z. \ \beta \ Q \ ad. \ sk.$	Selangore, March, Nov. (W. Davison).	Hume Coll.
a'- $e'$ . ♂♀ ad. sk.	Pulo Peban, Oct., Nov., Dec. (W. Davison).	Hume Coll.
f'. & ad. sk.	Neealys, Oct. (W. Davison).	Hume Coll.
g'. $Q$ ad. sk.	Kuroo, Oct. (W. Davison).	Hume Coll.
$h'-o'$ . $\mathcal{J} \supseteq \mathrm{ad. et}$	Chohong, Malacca, Oct., Nov.	Hume Coll.
imm. sk.	(W. Davison).	H . C 11
p'-v'. Ad. et imm.	Malacca, July.	Hume Coll.
sk.	Malagas (Canton)	India Muzaum [D]
w'. $Q$ ad. sk. $x'$ . $Q$ imm. sk.	Malacca (Cantor). Malacca (A. R. Wallace).	India Museum [P.]. Gould Coll.
a' O imm ek	Malacca (A. R. Wallace).	Tweeddale Coll.
$y'$ . $\circlearrowleft$ imm. sk. $z'$ , $a''$ . $\circlearrowleft$ $\circlearrowleft$ ad. sk.	Malaga Aug (P. C. W.	Tweeddale Coll.
~, " · O ‡ ad. sk.	Malacea, Aug. (R. G. W. Ramsay).	1 weeddale Coll.
b". Ad. sk.	Malacca.	Tweeddale Coll.
$c'', d'', e''$ . $\overrightarrow{\sigma}$ ad.	Johore, Aug. (W. Davison).	Hume Coll.
sk.	onoic, mag. (m. Daetson).	1141110 00111
$f''$ . $\delta$ ad. sk.	Singapore Is., Jan. (W. Davison).	Hume Coll.
g'', h''. Ad. sk.	Sumatra.	A. R. Wallace, Esq.
i''-s''. ♂♀ad. et imm. sk.	Sumatra, Sept., Oct. (Carl Bock).	Tweeddale Coll.
t''-w''. Ad. et	Lampong, S.E. Sumatra (E. C.	Tweeddale Coll.
imm. sk.	Buxton).	
x''. Ad. sk.	Sarawak.	A. H. Everett, Esq.
y". Ad. sk.	Sarawak.	Tweeddale Coll.
$z''$ , $a^3$ . Ad. et	Sarawak (A. H. Everett).	Tweeddale Coll.
imm. sk.	-,-	
$b^3$ , $c^3$ . Ad. et youn	g	Purchased.
st.		
$d^3$ , $e^3$ . Imm. st.	[India.]	Purchased.

#### 42. BOLBOPSITTACUS.

Type.

Bolbopsittacus, Salvad. MS. ..... B. lunulatus. Bill very thick, with both mandibles much swollen; upper mandible with the edges sinuated, not sharply toothed; tail very

short. The birds of this genus formed part of Cyclopsittacus, but the file-like surface of the distal portion of the palate shows very clearly that they do not belong to the Cyclopsittacide (see fig. 5 on p. 3).

Range. Confined to the Philippine Islands.

### Key to the Species.

a. Cheeks blue. a'. Cheeks and collar on the hind neck pale lunulatus 3, p. 504. b'. Cheeks and collar on the nape bright blue ..... intermedius 3, p. 505. b. Cheeks green. e'. Collar on the nape deep blue ..... mindanensis 3, p. 506. 

### 1. Bolbopsittacus lunulatus.

Petite Perruche à collier de l'isle de Luçon, troisième espèce, Sonn. Voy. Nouv. Guin. p. 77, pl. 39 (♂♀) (1776). Perruche à collier, Buff. Hist. Nut. Ois. vi. p. 173 (1779).

Collared Parrakeet, Lath. Syn. i. p. 317 (1781) (ex Somerat); id. Gen. Hist. ii. p. 270 (1822).

Psittacus lunulatus, Scop. Del. Flor. et Faun. Insubr. p. 86, n. 24

(1786) (ex Sonnerat).

Psittacus torquatus, Gm. S. N. i. p. 351, n. 134 (1788) (ev Sonnerat);
Lath. Ind. Orn. i. p. 133, n. 154 (1790); Bechst. Kurze Uebers.
p. 84 (1811); Shaw, Gen. Zool. viii. 2, p. 551 (1811); Vieill. N. D. xxv. p. 374 (1817); Kuhl, Consp. Psitt. p. 66 (1820); Vieill. Enc. Méth. iii. p. 1405 (1823); Voigt, Cuv. Uebers. p. 747 (1831); Pucher, Rev. et Mag. de Zool. 1853, p. 163.

Psittacus sreptophorus (lege streptophorus), Desm. Dict. Sc. Nat. xxxix. p. 88 (1826); Bp. Compt. Rend. xliv. p. 538 (1857).

Psittacula torquata, Steph. Gen. Zool. xiv. 2, p. 144 (1826); Wayl. Mon. Psitt. p. 630 (1832); Lear, Parr. pl. 40 (1832).

Psittacus loxia, Cuv. Mus. Paris, fide Less. Tr. d'Orn. p. 204 (1831); Pucher. Rev. et Mag. de Zool. 1853, p. 163.
Psittacula loxia, Less. Tr. d'Orn. p. 204 (1831); Bourj. Perr. pl. 94 (1837–38); Less. Compl. de Buff. ix. p. 209 (1837); id. op. cit. 2nd ed. p. 607 (1838); G. R. Gr. Gen. B. ii. p. 423, n. 22 (1846); id. List Psitt. Brit. Mus. p. 90 (1859).

Psittacula squammato-torquata, Bourj. Perr. pl. 97 (1837-38) (ex

Lear).

Psittacula lunulata, G. R. Gr. Gen. B. ii. p. 423, n. 22 (1846); id. List Psitt. Brit. Mus. p. 91 (1859); Schleg. Mus. P.-B. Psittaci, p. 72 (1864); Finsch, Papag. ii. p. 616 (1868); Schleg. op. eit. Rev. p. 31 (1874); Gieb. Thes. Orn. iii. p. 328 (1877).

Cyclopsitta Ioxia, Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 218; Hartl. Journ. f. Orn. 1854, B. p. lxiii; Souancé, Rev. et Mag. de Zool. 1856, p. 217; id. Navmannia, 1856, Consp. Psitt. n. 229; G. R. Gr. Hand-list, ii. p. 164, n. 8376 (1870).

Psittinus torquatus, Bp. Naumannia, 1856, Consp. Psitt. n. 159. Loriculus (Cyclopsitta) loxia, v. Mart. Journ. f. Orn. 1866, p. 21, n. 117.

Loriculus (Cyclopsitta) lunulatus, v. Mart. ibid. n. 118.

Psittacula loxias, Finsch, Papag. ii. p. 618 (1868); Gieb. Thes. Orn.

iii. p. 328 (1877).

Cyclopsitta lunulata, G. R. Gr. Hand-list, ii. p. 168, n. 8377 (1870); Wald, Tr. Zool. Soc. ix. pp. 133, 249 (1875); Sharpe, Trans. Linn. Soc. (2) Zool. i. p. 312 (1876); Tweedd. P. Z. S. 1877, pp. 689, 818, 1878, p. 937; id. Orn. Works, pp. 301, 410 (Luzon only),

514 (1881); Wardl. Ramsay, Tweedd. Orn. Works, App. p. 655 (part.) (1881); Meyer, Vogel-Skeletten, i. pl. xxi. (1879–88); Tristr. Cat. Coll. B. p. 78 (1889); Steere, List, p. 6 (1890).

Cyclopsittaeus lunulatus, Rehnw. Journ. f. Orn. 1881, p. 136 (Consp. Psitt. p. 136).

Cyclopsittacus loxias, Rehnw. Journ. f. Orn. 1881, p. 137 (Consp. Psitt. p. 73); id. Vogelbild. Nachtr. 18 (1883).

Adult male. Green; edge of the forehead, lores, feathers round the eyes, cheeks, throat, and a collar on the lower part of the hind neck pale blue; rump greenish yellow; bastard-wing and primary-coverts blue; quills brown-black, with an oblique yellowish band below; the primaries on the outer webs blue, the secondaries green, the inner secondaries entirely green; tail green above, verditer-blue below; "irides yellow-brown" (Meyer), "dark brown; bill black, base pale lead-grey; feet greenish grey, nails dark grey" (Everett). Total length about 6.5 inches, wing 3.8 to 4, tail 1.3, bill 0.7, tarsus 0.45.

Female. Differs from the male in having the blue confined to the lower cheek-feathers, covering the threat; a yellow collar with crescent-like black bands on the lower part of the hind neek; rump yellowish green, greener than in the male, and with black crescent-like bands.

Young male resembles the female.

Hab. Luzon.

a. Ad. st. Manilla. Cuming Coll. b. Ad. st. Philippine Is. Cuming Coll. Philippine Is. c. Ad. sk. Cuming Coll. d, e. Ad. sk. Philippine Is. Gould Coll. f, g. Ad. sk. Manilla (Cuming). Gould Coll. h. Ad. sk. Tweeddale Coll.  $i, k, l. \not\supset Q \text{ ad. sk.}$ Luzon, Jan., Feb. (A. B. Meyer). Tweeddale Coll. m. of ad. sk. Batan, Luzon, April (A. B. Meyer). Tweeddale Coll. n. ♀ ad. sk. Monte Alban, Luzon, Feb. (A. H. Tweeddale Coll. Everett). o. 3 ad. sk. San Mateo, Luzon, Feb. (A. H. Tweeddale Coll. Everett).

# 2. Bolbopsittacus intermedius. (Plate XIII.)

Similar to the male of *B. lunulatus*, from which it differs in having the face of a deeper blue with a purple tinge, and a blue collar on the lower part of the hind neek brighter and like that of *B. mindanensis*; the underparts arc of a brighter and deeper green than either in *B. lunulatus* or in *B. mindanensis*: bill black; feet greenish. Total length 5.8 inches, wing 3.9, tail 1.3, bill 0.75, tarsus 0.4.

Hab. Philippine Islands, but the exact locality unknown.

As B. lumilatus and B. mindanensis seem to be respectively eonfined to Luzon and Mindanao, it is very likely that the present bird lives in some of the intermediate islands.

a. 3? ad. st.

Philippine Islands.

Cuming Coll. (Type of species.)

#### 3. Bolbopsittacus mindanensis.

Cyclopsitta lunulata (part.), Tweedd. Tr. Zool. Soc. ix. pp. 134, 249 (Mindanao only) (1875); id. Orn. Works, pp. 301, 410 (Mindanao

only) (1881).

Cyclopsitta lunulata, Tweedd. (nec Scop.) P. Z. S. 1877, p. 818 (Butuan), 1878, p. 937 (Zamboanga); id. Orn. Works, pp. 545 (Butuan), 628 (Zamboanga) (1881); Wardl, Rams. Tweedd. Orn. Works, App. p. 655 (Mindan to only) (1881).

Cyclopsitta mindanensis, Steere, List B. & M. Steere Exped. to the

Philipp. p. 6 (1890).

Adult male. Differs from that of B. lunulatus in having the checks green, the blue round the eyes separated by the green checks from the blue of the throat; the collar on the lower hind neck is of a brighter and deeper blue; the green of the head has a yellowish tinge, contrasting with the purer green colour of the back: "iris dark brown; bill black, the base of the maxilla light grey; feet greenish" (Everett). Total length about 6 inches, wing 3.8 to 3.9, tail 1.3, bill 0.7, tarsus 0.38.

Adult female. Exactly similar to the female of B. lunulatus.

Hab. Mindanao, and the small island of Panaon on the northern coast of Mindanao.

a. ♂ juv. sk. b-y. ♂ ♀ ad. et imm. sk. h, i, k. ♂ ad. sk.

Surigao, May (A. H. Everett).

Butuan, May (A. H. Everett).

Zamboanga, March, April, May

Panaon, Oct. (A. H. Ererett).

Tweeddale Coll.\*
Tweeddale Coll.
Tweeddale Coll.

Tweeddale Coll.

# 43. AGAPORNIS.

Type.
A. swindereniana.

Agapornis, Selby, Nat. Libr., Parrots p. 117 (1836). A. swind Poliopsitta, Bp. Rev. et Mag. de Zool. 1854, p. 154. A. cana. Poliopsittacus, Sundev. Meth. nat. Av. disp. Tent. p. 69 (1872).

Range. Ethiopian Region.

# Key to the Species.

a. Uropygium and upper tail-coverts green.

a'. Bill grey.

a". Head, neck, and breast grey; under wing-

b". Head, neck, and breast like the rest of the body, green; under wing-coverts green...

b'. Bill red.

c". Forehead red; under wing-coverts black...
d". Head entirely green; under wing-coverts

cana ♂, p. 507.

cana ♀, p. 507.

taranta ♂, p. 509.

taranta ♀, p. 509.

<sup>\*</sup> This specimen was not mentioned by the Marquis of Tweeddale in his paper on the Birds of Panaon (P. Z. S. 1878, pp. 379-381).

swinderneiuna  $\mathcal{Z} \ \mathcal{Q}$ ,

b. Uropygium blue, upper tail-coverts green; face orange-red or orange-yellow. e'. Face orange-red; under wing-coverts black; carpal edge blue .....d'. Face orange-yellow; under wing-coverts carpal edge blue *pullaria* ♂, p. 510. green; carpal edge yellow ..... pullaria Q, p. 510. c. Uropygium green; upper tail-coverts ultramarine-blue; under wing-coverts green. e'. Forehead and cheeks orange-red; hind neck reddish yellow ..... fischeri ♀, p. 511. f'. Face blackish brown; a yellow collar round the neck personata 3, p.512. d. Uropygium and upper tail-coverts blue; under wing-coverts green. g'. Uropygium and upper tail-coverts light blue; [p. 522. roseicollis ♂♀, [p. 514. forehead bright red; sides of the head and

# Agapornis cana.

Psittacula madagascariensis, Briss. Orn. iv. p. 394, pl. xxx. f. 2 (1760). Petite Perruche de Madagascar, D'Aubent. Pl. Enl. 791, f. 2.

Perruche à tête grise, *Buff. Hist. Nat. Ois.* vi. p. 171 (1779). Grey-headed Parrakeet, *Lath. Syn.* i. p. 315 (1781); *id. Gen. Hist.* ii. p. 269 (with var. A?) (1822).

throat rose-colour ..... h'. Uropygium and upper tail-coverts deep blue; head green; a black collar on the hind neck.

Psittacus canus, Gm. S. N. i. p. 350, n. 131 (1788); Lath. Ind. Orn. i. p. 132, n. 151 (1790); Shaw, Nat. Misc. iii. pl. 425 (1800); id. Gen. Zool. viii. p. 550 (1811); Bechst. Kurze Ueb. p. 85 (1812); Vieill. N. D. xxv. p. 378 (1817); Kuhl, Consp. Psitt. p. 62 (1820); Vieill. Enc. Méth. iii. p. 1049 (1823); Voigt, Cuv. Uebers. p. 746 (1831); Sganz. Mém. Soc. H. N. Strassb. iii. p. 35 (1840).

Psittacula cana, Steph. Gen. Zool. xiv. 2, p. 148 (1826); Less. Tr. d'Orn. p. 202 (1831); Wagl. Mon. Psitt. p. 625 (1832); Bourj. Perr. pl. 96 (♂ ♀) (1837–38); G. R. Gr. Gen. B. ii. p. 423, n. 12 (1846); id. List Psitt. Brit. Mus. p. 90 (1859); Schleg. Mus. P.-B. Psittaci, p. 72 (1864); id. P. Z. S. 1866, p. 424; Finsch, Papag. ii. p. 643 (1868); Schleg. et Poll. Rech. Faun. Madag. pp. 53, 157 (1868); Finsch u. Hartl. Vög. O.-Afr. p. 502 (1870); Sharpe, Cat. Coll. Afr. B. p. 19 (1871); Schleg. Mus. P.-B. Psittaci, Revue, p. 31 (1874); Gulliv. P. Z. S. 1875, p. 489; Gieb. Thes. Orn. iii. p. 326 (1877); Hartl. Vög. Madag. p. 234 (1877); Shelley, P. Z. S. 1879, pp. 673, 675 (Anjuan); Schmidt, P. Z. S. 1880, p. 310.

Psittacus poliocar, Forst. Icon. Ined. t. 51, fide Wayl. l. c.; id. Descr.

An. p. 399 (1844).

Poliopsitta cana, Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 225; Souancé, Rev. et Mag. de Zool. 1856, p. 217; Bp. Naumannia, 1856, Consp. I'sitt. n. 228; Hartl. Journ. f. Orn. 1860, p. 107; id. Orn. Beitr. Faun. Madag. p. 59 (1861); Maill. Not. sur l'île de la Réun. ii. p. 13 (1863); Roch & E. Newt. Ibis, 1863, p. 165; F. Newt. Ibis, 1863, p. 165; F. Newt. Ibis, 1863, p. 165; p. 455; d. Newt. Ibis, 1864; p. 455; d. Newt. Ibis, 1864; p. 455; d. Newt. Ibis, 1864; p. 455; d. Newt. Ibis, 1864; p. 455; d. Newt. Ibis, 1864; p. 455; d. Newt. Ibis, 1864; p. 455; d. Newt. Ibis, 1864; p. 455; d. Newt. Ibis, 1864; p. 455; d. Newt. Ibis, 1864; p. 455; d. Newt. Ibis, 1864; p. 455; E. Newt. Ibis, 1863, p. 452; A. Newt. P. Z. S. 1865, pp. 46, 834; Grand. Rev. et Mag. de Zool. 1867, p. 389; Cab. v. d. Decken's Reisen, iii. p. 40 (1869) (Mafia Isl., S. of Zanzibar); Sousa, Mus. Nac. Lisb. Psittaci, p. 21 (1864); G. R. Gr. Hand-list, ii. p. 167, n. 8370 (1870).

Agapornis cana, Sclat. P. Z. S. 1860, p. 242; E. Newt. Ibis, 1861, p. 273 (Mauritius), 1865, p. 149 (Rodriguez); A. Newt. Ibis, 1872, p. 32; id. P. Z. S. 1875, p. 42; Rehnw. Vogelbild. t. xx. f. 5 (1878-83); id. Journ. f. Orn. 1881, p. 259 (Consp. Psitt. p. 147); Salvin, Cat. B. Strickl. Coll. p. 461 (1882); Sclat. List Vert. An. 8th ed. p. 330 (1883); Tristr. Cat. Coll. B. p. 76 (1889).

Cat. B. Strickl. Coll. p. 461 (1882); Sclat. List Vert. An. 8th ed. p. 330 (1883); Tristr. Cat. Coll. B. p. 76 (1889).

Psittacula madagascariensis, Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xix (1863); Milne-Edw. et Grand. Hist. Madag., Ois. i. p. 17, pls. 7, 8 (1876); Milne-Edw. § Oust. Nouv. Arch. du Mus. (2) vi. p. 229 (1884); Sibree, Madag. Orn. pp. 15, 22 (1889).

Agapornis madagascariensis, Sibree, Ibis. 1891, pp. 214, 217.

Adult male. Head, neck, and breast pearly grey, with the base of the feathers pale yellowish green, showing more or less through the grey edges; back and wings green, uropygium and upper tail-coverts brighter green: lower breast, abdomen, and under tail-coverts yellowish green; quills dusky black, with the outer web green; under wing-coverts black, metacarpal edge whitish; tail green, with a broad subterminal black band; the lateral tail-feathers have the base yellowish: iris brown; bill, feet, and toes grey. Total length 5.6 inches, wing 3.65, tail 2, bill 0.5, tarsus 0.5.

Adult female. Differs from the male in wanting the grey colour on the head, neck, and upper breast; the upper parts, including the hind neck and pileum, green; underparts, including the cheeks, the throat, and upper breast, yellowish green; under wing-coverts

green.

Young. Like the female. In the transitional stage, while the head, throat, and upper breast are beginning to show a grey tinge,

the nape and hind neck are still green.

Hab. Madagascar, but introduced in Mauritius, Réunion, Rodriguez, Anjuan, and perhaps also in Mafia Island, south of Zauzibar.

The series of specimens in the British Museum can be divided into two sets. In one set, from Madagasear and Anjuan, the green colour is pure; in the other set, from Rodriguez, but including also two specimens from Betsileo in Madagasear, collected by the Rev. W. D. Cowan, the green colour has a distinct bluish tinge. I cannot account for the difference. If the bluish birds were confined to Rodriguez Island, I should have said they belonged to a peculiar race,

#### Green Form.

Madagascar.	Purchased.
Madagascar.	Sir E. Belcher [P.].
Madagascar.	Sharpe Coll.
	Shelley Coll.
C	•
Madagascar,	Purchased.
	Shelley Coll.
	Madagascar. Madagascar. Madagascar. Madagascar. Madagascar. Anjuan ( <i>Kirk</i> ).

#### Bluish Form.

l. Ad. sk.	Ankafana, S. Betsileo, Mada-	Tweeddale Coll.
	gascar, March (W. Deans	
	Cowan).	

m. Ad. sk. Madagascar (W. Deans Cowan). Tweeddale Coll. n-s. Ad. et imm. Rodriguez. sk. Trans. of Venus Exped. t, u. Skeletons. Rodriguez.

### 2. Agapornis taranta.

Psittacus taranta, Stanley, Salt's Trav. Abyss., Append. p. lii (1814).

Abyssinian Parrakeet, Lath. Gen. Hist. ii. p. 187 (1822). Psittacula taranta, Lear, Parr. pl. 39 (1832): G. R. Gr. Gen. B. ii. p. 423, n. 9 (1846): Horsf. & Moore, Cat. B. Mus. E.I. Comp. ii. p. 607 (1856-58); G. R. Gr. List Psitt. Brit. Mus. p. 89 (1859); Heugl. Syst. Vebers. n. 472 (1856); Schleg. Mus. P.-B. Psittaci, p. 72 (1864); id. op. cit. Revue, p. 31 (1874).

Psittacus tarantæ, Rüpp. Neue Wirbelth. pp. 61.62 (1835): Harris, The Highlands of Æth. ii. p. 413 (1844) (Shoa); Leferre, Voy.

Abyss., Ois. p. 128 (1845–50).

Poicephalus taranta, Sw. Class. B. ii. p. 301 (1837).

Poitechalus taranta, Sac. Causs. B. n. p. 501 (1837)-38): Rüpp. Syst.
Psittacula tarantae, Bourj. Perr. pl. 99 (1837-38): Rüpp. Syst.
Ueb. Fög. N.O.-Afr. p. 95, n. 334 (1845): Ferret et Gallin, Voy.
Abyss. iii. p. 188 (1847); Heugl. Fawn. Roth. Meer. n. 195; id.
Journ. f. Orn. 1861, p. 196; Finsch, Papag. ii. 2, p. 634 (1868);
id. Tr. Zool. Soc. vii. p. 281 (1870): Blanf. Geol. § Zool. Abyss.
p. 304 (1870); Gieb. Thes. Orn. iii. p. 330 (1877).

Agapornis taranta, Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 221; Souancé, Rev. et May. de Zool. 1856, p. 217; Bp. Naumannia, 1856, Consp. Psitt. n. 223; Sousa, Mus. Nac. Lisb. Psittaci, p. 20 (1869);

G. R. Gr. Hand-list, ii. p. 167, n. 8368 (1870). Agapornis tarantæ, Heuyl. Journ. f. Orn. 1862, p. 37; id. Orn. N.O.-Afr. i. p. 746 (1869), ii. 2, p. clviii (1873); Rchnw. Vogelbild. t. xx. f. 2 (1873-83); id. Journ. f. Orn. 1881, p. 257 (Consp. Psitt. p. 145); Salvad. Ann. Mus. Civ. Gen. (2) i. p. 82 (1884); Gigl. Ann. Mus. Civ. Gen. (2) vi. p. 51 (1888); Salvad. ibid. p. 208 (1888).

Psittaculus tarantæ, Heugl. Journ. f. Orn. 1862, pp. 293, 305.

Adult male. Green; sinciput, lores, and a ring of feathers round the eyes red: uropygium, upper tail-coverts, and underparts bright green; primaries brown, with a narrow green edge on the outer web; secondaries, bastard-wing, and primary-coverts black; the outermost greater wing-coverts also black, but tipped with green; under wing-coverts black; tail green, with a broad subapical black band, the inner web of the lateral tail-feathers towards the base yellowish: "iris brown; bill red; feet lead-grey" (Antinori). Total length 6.4 inches, wing 4, tail 1.9, bill 0.68. tarsus 0.45.

Adult female. Wants the red on the front part of the head, which

is entirely green.

Young male. Like the female. Gradually it shows the red feathers first round the eyes and then on the forehead and lores.

Hab. North-eastern Africa, from Abyssinia to Shoa.

a. Ad. st. b. Ad. sk. Abyssinia. Abvssinia. Baron Laugier Coll. Lord Mountnorris P.

Tigré, Abyssinia, W. T. Blauford, Esq.  $c, d, \beta \supseteq \text{ad. sk.}$ Adigrat, [C.]. April. Raraguddy, Abyssinia, April Tweeddale Coll. e, f. ∂ ad. sk. ( W. Jesse). Shoa, Jan. India Museum [P.]. y. ♂ ad. sk. Ankoher, (Harris). Shoa, Feb. & March (Anti-Shelley Coll. h, i, k. of ad. sk. nori).

### 3. Agapornis pullaria.

Little red-headed Parrakeet, or Guiney Sparrow, Edw. Glean. v. p. 54, pl. 237. f. 1 (1758).

Psittacula guineensis, Briss. Orn. iv. p. 387 (1760); Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xix (1863).

Psittaeus pullarius, Linn. Mus. Ad. Fr. ii. p. 15 (1764); id. S. N. i. p. 149, n. 45 (1766); Scop. Ann. I. Hist. Nat. p. 33 (1769); Gm. S. N. i. p. 348, n. 45 (1788); Lath. Ind. Orn. ii. p. 129, n. 143 (1790); Shaw, Nat. Misc. i. pl. 35 (1790); id. Gen. Zool. viii. 2, p. 549, pl. 84 (1811); Bechst. Kurze Ueb. p. 104 (1811); Vieill. N. D. xxv. p. 378 (1817); Kuhl, Consp. Tsitt. p. 66 (1820): Hahn, Vög. aus. Afr. etc. Lief. xi. t. 1 (1822); Vieill. Enc. Méth. iii. p. 1409 (1823); Voigt, Cuv. Uebers. p. 747 (1831); Hahn, Orn.

Atl., Papag. p. 36, t. 20 (1834). Petite Perruche mâle de Guinée, D'Aubent. Pl. Enl. 60.

Psittacus guineensis, Müll. S. N. Suppl. p. 81 (1776); Cass. Pr. Ac. Nat. Sc. Philad. 1864, p. 241.

Perruche à tête rouge ou Moineau de Guinée, Buff. Hist. Nat. Ois. vi. p. 105 (1779).

Red-headed Guinea Parrakeet, *Lath. Syn.* i. p. 309 (1781); *id. Gen. Hist.* ii. p. 261 (1822).

Psittacula pullarià, Steph. Gen. Hist. xiv. 2, p. 145 (1826); Less. Tr. d'Orn. p. 203 (1831); Wagl. Mon. Psitt. p. 622 (1832); Hartl. Syst. Verz. Ges. Mus. p. 88 (1844); G. R. Gr. Gen. B. ii. p. 423, n. 11 (1846); id. List Psitt. Brit. Mus. p. 89 (1859); Schleg. Mus. P.-B. Psittaci, p. 71 (1864); Keulem. Ned. Tijdschr. Dierk. iii. p. 382 (1866); Dohrn, P. Z. S. 1866, p. 329; Finsch, Papag. ii. 2, p. 636 (1868); Mellis, Ibis, 1870, p. 101; Sharpe, Cat. Coll. Afr. B. p. 19 (1871); Schleg. Mus. P.-B. Psittaci, Recue, p. 31 (1874); Gulliv. P. Z. S. 1875, p. 489; Bocage, Journ. f. Orn. 1876, p. 316; Gieb. Thes. Orn. iii. p. 329 (1877); Bocage, Orn. d'Ang. p. 72 (1881); Shell. Ibis, 1883, p. 559 (Shonga).

Psittacula rubricollis vel pullaria guineensis, Eourj. Perr. pl. 90 (1837-38).

Agapornis pullaria, Bp. Rev. et May. de Zool. 1854, p. 154, n. 222; Hartl. Journ. f. Orn. 1854, p. 194; Souancé, Rev. et May. de Zool 1856, p. 217; Bp. Naumannia, 1856, Consp. Psitt. n. 224; Hartl. Syst. Orn. W.-Afr. p. 168 (1857); id. Journ. f. Orn. 1861, p. 262; Parker, P. Z. S. 1863, p. 516, 1865, p. 237; Bocage, Jorn. Sc. Lisboa, n. ii. p. 143 (1867); Heuyl. Orn. N.O.-Afr. i. p. 748 (1869); Sousa, Mus. Nac. Lisb. Psittaci, p. 20 (1869); Heuyl. Peterm. Geogr. Mitth. 1869, p. 415; G. R. Gr. Hand-list, ii. p. 167, n. 8366 (1870); Heuyl. Orn. N.O.-Afr. ii. 2, p. clviii (1871); Eund. Meth. nat. Av. disp. Tent. p. 69 (1872); Ussh. Ibis, 187, p. 56; Rehne. Journ. f. Orn. 1875, p. 10, 1877, p. 14; id. Vogelbild. t. xx. f. 3 (1878–83); id. Journ. f. Orn. 1881, p. 257 (Consp. Psitt. p. 145); Hartl. Abh. Erem. viii. p. 212 (1882); Hartert,

Journ. f. Orn. 1886, p. 598; Rehnw. Journ. f. Orn. 1887, p. 302; Shell. P. Z. S. 1888, p. 45 (Tingasi); Tristr. Cat. Coll. B. pp. 76, 77 (1879).

Agapornis xanthops, Heugh Journ, f. Orn. 1863, p. 271, 1864, p. 268.

Adult male. Green, underneath vellowish green, throat tinged with yellow; face orange-red; the orbital feathers under the eyes white and blue; uropygium bright blue; quills with the outer web dark green, and the inner web dusky; bend of the wing and under wing-coverts deep black; metacarpal edge blue and yellow; tail with a black subapical band, the central tail-feathers green, the lateral ones yellowish green at the base and at the tip, red between the green base and the black band; on the outer tail-feather the red is confined to the inner web: bill red; feet dark grey; iris dark brown. Total length about 6 inches, wing 3.5 to 3.7, tail 1.6 to 1.8, bill 0.55, tarsus 0.45.

Female. Has the forehead, the feathers near the base of the lower mandible, and the throat yellow-orange; the blue spot on the uropygium paler than in the male; the under wing-coverts green, and the metacarpal edge yellow; the tail as in the male.

Young. Like the adult female, but the forehead is yellow, with no orange tinge, and the yellow-orange colour near the base of the bill

and on the throat paler.

Hab. Western Africa, from the Gold Coast to the Congo, including the islands of Bight of Benin, ranging eastwards across Equatorial Africa as far as the Gazelle River district and Niam-Niam Country.

a. Ad. st. [var.]. Africa. b. Ad. st. Africa. c, d. Ad. sk. Africa. e. Ad. sk. W. Africa. f, g. Ad. sk. W. Africa. h. Ad. sk. Cape Coast. i. Ad. sk. Congo. k. Ad. sk. l. 1mm. sk. m. Ad. sk. Lagos. n. 3 ad. sk. Shonga. o. o imm. sk.  $p, q, \beta \neq \text{ad. sk.}$  $r, \beta \text{ imm. sk.}$ Tingasi, July. Wadeli, Sept. (Emin Pasha). s, t. Ad. sk.

u, v. Ad. sk. w. r. Skeleton and skull.

Massabe, Congo (Petit). Landano, Congo (Petit). River Niger, May.

[Cape Town.]

J. Doubleday, Esq. [P.]. J. Pulham, Esq. [P.]. Purchased. Sharpe Coll. Dr. O. Finsch [C.]. Colonel Strachan [P.]. Shelley Coll. Shelley Coll. Shelley Coll. Sir A. Moloney [P.]. W. A. Forbes, Esq. [C.]. F. Nicholson, Esq. [P.]. Emin Pasha [P.]. Shelley Coll.

Shelley Coll. Earl of Crawford [P.].

# 4. Agapornis fischeri.

Agapornis fischeri, Rchnw. Journ. f. Orn. 1887, pp. 54, 220 (Ussure, Vietoria Nyanza) (♀), 1889, t. iv. f. 1.

Female. Forehead, cheeks, and throat orange-red, darker on the forehead, paler on the throat, where it turns to rose-colour; vertex dull olive-green, occiput tinged with reddish; band on the hind neck

reddish yellow; also the throat is margined with yellowish underneath; back and wings green; the body underneath pale green; the upper tail-coverts ultramarine-blue; the central tail-feathers green, with the tip pale blue; the outer tail-feathers red at the base, green in the middle, pale blue at the tip, and with a black band on the inner web before the blue tip; the quills are black on the inner web, green on the outer; small under wing-coverts green, the greater ones grey-blue: bill coral-red; feet grey; iris brown; naked skin round the eyes and cere white. Total length 5.31 inches, wing 3.70, tail 1.57, height of the bill 0.66, tarsus 0.55.

Hab. Ussure, Victoria Nyanza.

## 5. Agapornis personata.

Agapornis personata, Rchnw. Journ. f. Orn. 1887, pp. 40, 55, 320 (Serian, Victoria Nyanza), 1889, t. iv. f. 2, 1891, p. 144 (Ugogo).

Adult male. Forehead, lores, and anterior part of the cheeks deep blackish brown; upper parts pale olive-brownish; band on the hind neck and throat yellow; upper breast reddish orange; back and wings green; underparts pale green; upper tail-coverts pale ultramarine-blue; middle tail-feathers green, the others orange at the base, green in the middle, yellowish at the tip, with a black band before the yellowish tip; quills green on the outer web, black on the inner; edge of the wing yellow; smaller under wing-coverts green, the greater ones grey-blue: iris brown; bill coral-red; feet greenish lead; cere white. Total length 5.70 inches, wing 3.74, tail 1.88, height of the bill 0.66, tarsus 0.55.

Female. Like the male (?).

Hab. Serian, Victoria Nyanza, and Ugogo.

Berlin Mus. [E.]. a. d ad. sk. Ntive, Ugogo, July (Emin Pasha).

# 6. Agapornis roseicollis.

Psittacus pullarius, var. \$\beta\$, Licht. Cat. Rev. nat. rariss. Hamb. p. 7,

n, 74 (1793); Meyer, Zool. Annal. i. p. 141.
Psittacus roseicollis, Vieill. N. D. xxv. p. 377 (1817); Kuhl, Consp. Psitt. p. 63 (1820); Vieill. Enc. Méth. iii. p. 1408 (1823).
Psittacus parasiticus, Mus. Tennunck, fide Kuhl, l. c.

Psittacula roseicollis, Steph. Gen. Zool. viii. 2, p. 143 (1826); Less. Tr. d'Orn. p. 204 (1831); Wagl. Mon. Psitt. p. 623 (1832); Bourj. Perr. pl. 91 (1837-38); G. R. Gr. Gen. B. ii. p. 423, n. 10 (1846); id. List Psitt. Brit. Mus. p. 89 (1859); Alexand. Exped. of Discov. Int. of S Afr. ii. Append. p. 266; Schleg. Mus. P.-B. Psittaci, p. 71 (1864); Monteiro, P. Z. S. 1865, p. 94; Layard, B. of S. Afr. p. 231 (1867); Finsch, Papag. ii. p. 640 (1868); Layard, Ibis, 1869, p. 372 (Limpopo, S. Africa); Brehm, Journ. f. Orn. 1869, pp. 358, 415; Finsch u. Hartl. Vöy. Ost-Afr. p. 501 (1870); Shapar D. Z. S. 1870. Sharpe, P. Z. S. 1870, p. 146; id. Cat. Afr. B. p. 19 (1871); Anderss. B. Damara-Land, p. 216 (1872); Bocage, Jorn. Sc. Lisboa, 1873, p. 292; Schleg. Mus. P.-B. Psittaci, Revue, p. 31 (1874); Bocage, Journ. f. Orn. 1876, p. 316; Gieb. Thes. Orn. iii. p. 330 (1877); Bocage, Orn. d'Ang. p. 73 (1881). Agapornis roseicollis, Strickl. \$ Sclat. Contr. Orn. 1852, p. 156; Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 223; Sonancé, Rev. et Mag. de Zool. 1856, p. 217; Bp. Naumannia, 1856, Consp. Psitt. n. 225; Hartl. Journ. f. Orn. 1861, p. 262; Rirk, Ibis, 1864, p. 329 (Shiré, between Nyassa and the rapids); Chapm. Trav. in S. Afr., App. p. 406 ( ); Bocage, Jorn. Sc. Lisboa, i. p. 336 (1867); Sousa, Mus. Nac. Lisboa, Psittaci, p. 20 (1869); Russ, Journ. f. Orn. 1869, p. 82; Brehm, Journ. f. Orn. 1869, p. 139; G. R. Gr. Handlist, ii. p. 167, n. 8367 (1870); Garrod, P. Z. S. 1873, pp. 465, 634; Sharpe, Layard's B. of S. Afr. p. 192 (1875–84); Rehnw. Vogelbild. t. xx. f. 1 (1878–83); id. Journ. f. Orn. 1881, p. 258 (Consp. Psitt. p. 146); Salv. Cat. B. Strickl. Coll. p. 461 (1882); Sclat. List Vert. An. 8th ed. p. 330 (1883); Büttük. Not. Leyd. Mus. xi. pp. 69, 195 (1889); Tristr. Cat. Coll. B. p. 77 (Natal!) \* (1889). Psittacula passerina, Magyar László, Délafrik, Utazasai, 1849–51, i. p. 242.

Agapornis roseicapilla (errore), Garrod, P. Z. S. 1874, p. 587.

Adult male. Green, underneath yellowish green; forehead and supercilium red; lores, sides of the head, and throat pale rose-colour; uropygium and upper tail-coverts cobalt-blue; quills dusky, green on the outer web; the inner web of the quills underneath and greater under wing-coverts tinged with bluish; the remaining under wing-coverts green; tail tipped with pale blue; central tail-feathers blue, the lateral ones red towards the base, then green, with a black incomplete band: bill yellow; feet dusky. Total length about 6 inches, wing 4·2, tail 2, bill 0·7, tarsus 0·5.

Adult female. Apparently like the male.

Young. No red colour on the forehead, which is fulvescent; the

rose-colour of the cheeks and throat very pale.

Hab. South-western Africa, from Angola to Great Namaqua-Land, and, according to Layard, also South-eastern Africa, on the Limpopo.

a	Ad. st.	S. Africa.	Purchased.
	Juv. st.	S. Africa.	Massena Coll.
c.	d ad. sk.	[Gaboon] (Verreaux).	Sharpe Coll.
d.	Ad. sk.	Benguela.	Monteiro Coll.
e.	♂ ad. sk.	Kattenbella, Oct. (Sala).	Sharpe Coll.
f.	♂ ad. sk.	Ondonga, Damara-Land (Andersson).	Sharpe Coll.
q.	♀ ad. sk.	Damara-Land.	Purchased.
	♀ ad. sk. i. ♂ ad. et ad.	Omaruru, Nov.	Shelley Coll.
	elr		

k. Sternum.

<sup>\*</sup> Being unable to find in Mr. Gurney's accounts of Ayres's collections from Natal a Parrot under the name of A. roseicollis, I have asked Canon Tristram to send me the bird registered in his Catalogue; it is marked Limpopo River; but Mr. Sharpe informs me that it has the appearance of one of Andersson's skins from Damara-Land.

## 7. Agapornis swindereniana.

Psittacus swindernianus, Kuhl, Consp. Psitt. p. 62 (1820); Voigt, Cuv. Uebers. p. 746 (1831).

Psittacus swinderianus, Kuhl, op. cit. t. ii. (1820).

Psittacula swinderniana, Steph. Gen. Zool. xiv. 2, p. 143 (1826); G. R. Gr. List Psitt. Brit. Mus. p. 89 (Western Afr.) (1859); Büttik. Not. Leyd. Mus. vii. p. 214 (1885), viii. p. 263 (1886), x. p. 94 (1886), xi. p. 135 (1889).

Psittacula swindereniana, Wagl. Mon. Psitt. p. 621 (1832); G. R.

Gr. Gen. B. ii. p. 423, n. 8 (1846). Psittacula swinderiana, Lear, Parrots, pl. 42 (1832); Bourjot, Perr. pl. 98 (1837–38); Schleg. Dierent. p. 66 (1864); Layard, B. of South Afr. p. 231 (1867).

Agapornis swinderianus, Selby, Nat. Libr., Parrots, p. 118, pl. 11 (and

titlepage) (1836).

Poicephalus swinderianus, Sw. Class. B. ii. p. 301 (1837).

Psittaculus swinderianus, Brehm, Mon. d. Papag. t. 36 (1853).

Agapornis swinderiana, Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 224; id. Naumannia, 1856, Consp. Psitt. n. 226; Hartl. Journ.

f. Orn. 1861, p. 262.

Psittacula swindereni, Finsch. Papag. ii. p. 632 (1868); Cab. u. Rchnw, Orn. Centralbl. 1876, p. 26; Gieb. Thes. Orn. iii. p. 330 (1877); Cab. Journ. f. Orn. 1877, t. 5. f. 2; Cab. u. Rchnw. Orn. Centralbl. 1878, p. 64; Rehnw. Journ. f. Orn. 1878, p. 209; id. Vogelbild. t. xx. f. 4 (1878-83); id. Journ. f. Orn. 1881, p. 258 (Cousp. Psitt. p. 146).

Agapornis swinderniana, G. R. Gr. Hand-list, ii. p. 167, n. 8369 (1870); Hartl. Ibis, 1879, p. 84; Tristr. Cat. Coll. B. p. 77 (1889). Agapornis swindereniana, Sundev. Meth. nut. Av. disp. Tent. p. 69

(1872).

Agapornis swindernaina (errore), Hartl. Ibis, 1879, p. 84.

Adult male. Green, underneath paler; neck olive-brown; a black collar round the nape; lower back, uropygium, and upper tailcoverts deep blue; quills dusky black, green on the outer web; the primaries edged with brighter green on the outer web; primarycoverts black; under wing-coverts green; central tail-feathers green, sometimes with a red-orange spot in the middle, the remaining tail-feathers red towards the base, green at the tip, and with a subterminal black band; tip of the tail underneath verditer-blue: "iris yellow, upper mandible black, under mandible bluish horngrey; feet grey" (Büttikofer). Total length 5.2 inches, wing 3.5. tail 1.33, bill 0.55, tarsus 0.42.

Female. Like the male.

Young. "The full-grown young male differs from the adult ones by the want of the black collar across the neck, which is only indicated by some black feathers on each side, and by a somewhat duller green colour" (Büttikofer).

Hab. Liberia, West Africa.

a. ♀ ad. sk. Tunk River, Liberia, Jan. Shelley Coll. (Dr. Büttikofer). Dr. Büttikofer [P.]. Tunk River, Liberia, March. b. 3 ad. sk. c. Ad. sk. W. Africa. Shelley Coll.

#### 44. LORICULUS \*.

Туре.

Range. From India and the Philippine Islands, through the Malay Archipelago, as far east as the Duke of York Island of the Papuan subregion.

## Key to the Species.

а.

Key to the Species.	
Bill orange-red.	
a'. Head in the adult birds entirely green.	
$a^{\prime\prime}$ . No red spot on the throat.	
a'''. Throat bluish in the male, but with no	
blue colour or scarcely any in the	•
female	vernalis, p. 517.
b'''. Throat yellowish	pusillus, p. 520.
b". A red spot on the throat, wanting at least	* ' *
in the female of L. evilis.	
c'''. Larger, wing 3 inches; nape tinged with	
orange; tips of the tail-feathers yel-	
lowish stained with red	flosculus, p. 521.
d'''. Smaller, wing 2.55 inches; no orange	
tinge on the nape; tips of the tail-	
feathers yellowish green	<i>exilis</i> , p. 521.
b'. Head not entirely green in the adult birds;	
crown partly or entirely red.	
c''. Red colour on the crown confined to the	
forehead.	
e'''. Tail above dark green, with no blue.	
a <sup>4</sup> . Interscapular region golden yellow,	
more or less tinged with orange; a	
red patch on the throat and green	
cheeks in the adult male; no red	
patch on the throat, cheeks and chin bluish in the female	alamanatus n 500
b. Interscapular region green, with no	chrysonotus, p. 522.
golden-prange tinge; cheeks green in	
the males, bluish in the females.	
$a^3$ . A golden-orange spot on the nape.	
a <sup>6</sup> . Vertex bright orange - yellow,	
sharply defined in the male; ver-	
tex slightly tinged with orange,	
and cheeks blue in the female	regulus, p. 523.
b <sup>6</sup> . Vertex and nape with a very slight	, og, p. 020.
yellow tinge, both in males and	
females; female like that of $L$ .	
regulus	philippensis, p. 524.
	1 11 / 1

<sup>\*</sup> Loriculi have not the tongue filamented as in the Loriuæ, with which they have been generally, but quite erroneously, classed (Blyth). 2 L 2

b.

b. No golden-orange spot on the nape; the red forehead ending sharply in the green of the head  f'''. Tail dark green, deep blue towards the tips of the lateral feathers; sinci-	mindorensis, p. 526.
put red in the male, red veiled with blue, and the cheeks also blue, in the female	siquijorensis, p. 526.
<ul> <li>g'''. Tail-feathers above green; male and female alike with bluish throat</li> <li>h'''. Tail-feathers above green, but towards the tips more or less deep blue; cheeks</li> </ul>	indicus, p. 526.
green, and a red patch on the throat of the male; cheeks blue, and no red patch on the throat of the female  Bill black. c'. Rump and upper tail-coverts red.	apicalis, p. 528.
e". Forehead not yellow.  i"". Crown red  k"". Crown not entirely red, or with no red at all.	bonapartei, p. 530.
<ul> <li>c<sup>4</sup>. A deep blue spot on the middle of the crown; a red patch on the throat of the male, wanting in the female</li> <li>d<sup>4</sup>. No blue spot in the middle of the crown.</li> </ul>	galgulus, p. 531.
c <sup>5</sup> . Under tail-coverts green. c <sup>6</sup> . Interscapular region golden orange, or tinged with orangered.	
a <sup>7</sup> . Base of the bill yellow; head green, both in male and female; interscapular region tinged with orange-red in the male,	
golden yellow in the female  b <sup>7</sup> . Bill entirely black; interscapular region golden orange; crown red in the male, green in the female	quadricolor, p. 534.
d <sup>8</sup> . Interscapular region green, slightly washed with yellow. c <sup>7</sup> . Larger, wing 3.8 inches; rump and upper tail-coverts dark cherry-red; sinciput bright red	1 martier, p. 301.
in the male, green in the female	stigmatus, p. 535.
male, green in the female $d^{5}$ . Under tail-coverts tinged with red;	amabilis, p. 536.
carpal edge green	catamenia, p. 537.
green, like the cheeks, in the female d'. Rump and upper tail-coverts greenish yellow.	aurantiifrons, p.537. tener, p. 538.

#### 1. Loriculus vernalis.

Psittacus vernalis, Sparrm. Mus. Carls. t. 29 (1787); Lath. Ind. Orn. i. p. 130, n. 147 (1790); Bechst. Kurze Ueb. p. 105 (1811): Vieill. N. D. xxv. p. 375 (1817); id. Enc. Méth. iii. p. 1407 (1823): Voigt, Cuv. Uebers. p. 747 (1831).

Vernal Parrakeet, Lath. Syn. Suppl. ii. p. 95, n. 26 (1802): id. Gen.

*Hist.* ii. p. 265 (1822).

Psittacus indicus, fem., Kuhl, Consp. Psitt. p. 65 (1820). Psittacula galgulus, fem., Wagl. Mon. Psitt. p. 626 (1832). Psittacula minor, fem., Wagl. op. cit. p. 529 (1832).

Psittaculus galgulus, Selby, Nat. Libr., Parrots, p. 167 (1836) (syn. emend. et sola descr.  $\mathcal{Q}$ ?).

Psittaculus pendulus, Pears. Journ. A. S. B. x. p. 654 (1841).

Psittaculus vernalis, Blyth, Journ. A. S. B. x. p. 921 (1841); Jerd. Madras Journ. xi. p. 209 (1840).

Psittacula pyrhopyga v. vernalis, Hodgs. Gray's Zool. Misc. p. 85 (1844).

Psittacula vernalis, G. R. Gr. Gen. B. ii. p. 423, n. 15 (syn. emend.) (1846); id. Cat. Hodgs. Coll. B. M. p. 113 (1846).

Loriculus vernalis, Blyth, Cat. B. Mus. A. S. B. p. 10, n. 46 (part.) (1849); id. Journ. A. S. B. xviii. p. 801 (1849), xix. p. 236 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 239; ? Souancé, Rev. et Mag. de Zool. 1856, p. 219; Bp. Naumannia, 1856, Consp. Psitt. n. 246; Horsf. & Moore, Cat. B. Mus. E. I. Comp. ii. p. 627 (1858); G. R. Gr. List Psitt. Brit. Mus. p. 54 (syn. emend.) (1859); Jerd. B. of Ind. i. p. 265 (1862); Gray, Cat. Hodgs. Coll. B. Mus. 2nd ed. p. 62, n. 465 (1863); Blyth, Ibis, 1863, p. 6 (part.); id. App. Zool. of the Andam. Isl. in Mouat's Arch. Andam. Isl. p. 355 (1863); Wald. P. Z. S. 1866, p. 538; Blyth, Ibis, 1867, p. 295; Beav. Ibis, 1867, p. 320 (Andaman Isl.), 1869, p. 412; Elwes, Ibis, 1870, p. 527; G. R. Gr. Hand-list, ii. p. 152, n. 8172 (1870); Ball, Jown. A. S. B. xli, p. 279 (1872); Wald. Ibis, 1873, p. 298; Ball, Str. Feath. i. p. 62 (1873); Hume, Nests & Eygs, p. 119 (1873); Wald. Ibis, 1873, p. 298; Hume, Str. Feath. ii. pp. 57, 185, 471 (1874), iii. p. 57 (1875); Blyth & Wald. B. of Ruger, p. 58 (1875); Girl. Theo. Com. ii. 190, 1873); Exist. II. pp. 91, 169, 411 (1814), III. p. 91 (1819); Biyth & Wata, B. 0f Marm, p. 58 (1875); Gieb. Thes. Orn. ii. p. 499 (1875); Fairb. Str. Feath. iv. pp. 255, 265 (1876); Armstr. ibid. p. 309 (1876); Hume, ibid. p. 388 (1876), v. p. 25 (1877); Fairb. ibid. p. 395 (1877); Meyer, Rowl. Orn. Misc. ii. pp. 231, 234, n. 1 (1877); Hume & Davis. Str. Feath. vi. pp. 120, 500 (1878); Hume, Str. Feath. vii. p. 87, n. 153, p. 153 (1879); Vidal, Str. Feath. v. p. 57 (1880); Pingh. Str. J. 161 (1880); P. 162 (1880); P. 163 (18 (1880); Bingh. ibid. p. 161 (1880); Butl. ibid. p. 384 (1880); Oates, Str. Feath. x. p. 190 (1882); Salv. Cat. B. Strickl. Coll. p. 459 (1882); Oates, B. of Brit. Burm. ii. p. 146 (1883); Salvad. Ann. Mus. Civ. Gen. (2) v. p. 560 (1888), vii. p. 376 (1889); Tristr. Cat. Coll. B. p. 26 (1889); Murr. Avif. of Brit. Ind. ii. p. 463 (1890); Oates, Nests & Eggs Ind. B. iii. p. 92 (1890).

Loriculus indicus (part.), Souancé, Rev. et Mag. de Zool. 1856, p. 226

(A, femelle).

Loriculus apicalis (part), Souancé, ibid. (B, femelle).

Coryllis vernalis, Finsch, Papag. ii. p. 721 (1868); Rehnw. Vogelbild. t. xv. f. 4 (1878-83); id. Journ. f. Orn. 1881, p. 226 (Consp. Psitt, p. 114); Müll. Journ. f. Orn. 1882, p. 428 (Salanga).

Adult male. Green, paler beneath, the head brighter, a slight tinge of orange on the interscapular region; rump and upper tailcoverts red; a bluish patch on the throat; upper breast tinged with yellowish; quills on the inner web and tail underneath verditerblue: "iris pale yellowish white; eyelids yellowish; bill dull coral-red, yellow at the tip; eere red; legs pale orange; claws pinkish horn" (Oates). Total length 5.5 inches, wing 3.5 to 3.7, tail 1.6 to 1.8, bill 0.52, tarsus 0.4.

Adult female. Differs from the male in having the green of the head less brilliant, especially on the cheeks, and no blue tinge, or scarcely any, on the throat; the general green colour is a little

more yellowish.

Foung. The green colour duller; all the feathers with very narrow brown edges; forehead and cheeks dull greyish green; no

trace of blue on the throat.

Hab. India, and from Sikhim through the Indo-Burmese countries to the Malay peninsula; Andaman and perhaps also the Nicobar Islands.

u. Ad. st.	India.	Purchased.
b. Ad. st. c. Ad. st.		Zoological Society's Coll. Massena Coll.
d. Ad. st.	[Philippines.]	Massena Coll. (Type of
		L. apicalis, Q, Souancé.)
e. Ad. sk.	A	Gould Coll.
f, g. Ad. et imm. sk.	Anjango, Travancore.	Hume Coll.
h. d ad. sk.	Mynall, S. Travancore, Dec. (F. Bourdillon).	Hume Coll.
i. k. ♂♀ ad. sk.	Mynall, S. Travancore, Dec.	F. Bourdillon [C.].
$l. m, n. \ $ ad. sk.	Kotagherry, Nilghiris, June, Nov. (Miss Cockburn).	Hume Coll.
$\rho, p, q, \beta \neq \text{ad. sk.}$	Burlias, Nilghiris, Nov.	Hume Coll.
r. 3 ad. sk.	Kullar, Nilghiris, Nov. (R. G. W. Ramsay).	Tweeddale Coll.
s, t. Ad. sk.	Coonoor Ghât, Nilghiris, April (R. G. W. Ramsay).	Tweeddale Coll.
u, v. Ad. sk.	Coorg, Nilghiris.	Tweeddale Coll.
w. ♂ ad. sk.	Seegore, Nilghiris, Aug.	Tweeddale Coll.
v. ♂ ad. sk.	(R. G. W. Ramsay). Sultan's Battery, Wynaad,	Hume Coll.
	April (W. Davison).	
$y-b'$ . $\beta \subsetneq ad$ . et	Wynaad, April (W. Davi-	Hume Coll.
imm. sk. $c'$ . Imm. sk.	son). Palghaut Hills, April (R.	Hume Coll.
0 7 210000 011	H. Morgan).	TIME COIL
d'. of ad. sk.	Belgaum (E. A. Butler).	Hume Coll.
e', f'. & juv. sk.	Khandala, Jan., May (S. B. Fairbank).	Tweeddala Coll.
g'. Ad. sk.	Madras.	Rev. H. H. Baber [P.].
h', i'. Ad. sk.	Malabar.	Tweeddale Coll.
k', $l'$ . Ad. sk. $m'$ . Ad. sk.	Nepal. Bhotan Doars, Jan. (L.	B. H. Hodgson, Esq.[P.]. Hume Coll.
m' [ t] ad al-	Mandelli).	II O II
$n'$ . $[\mathcal{J}]$ ad. sk. $o'$ , $p'$ . Ad. sk.	Sylhet, Cachar,	Hume Coll. Hume Coll.
q'. Ad. sk.	Thayetmyo, July.	Ilume Coll.

$r'$ . $\mathcal{J}$ ad. sk.	Kyouk Phyow, April (J.	. Hume Coll.
$s'$ . $\delta$ ad. sk. $t'$ . $\delta$ ad. sk.	Armstrong). Borongho Is., March (J. A.). Elephant Point, Jan. (J.	
$u', v', w'$ . $\delta$ ad.	A.). Tonghoo, Oct., Nov. (R. G.	Tweeddale Coll.
et juv. sk. $x'$ . $\varphi$ ad. sk. $y'$ . Ad. sk.	W. Ramsay). Tenasserim, Dec. Tenasserim, March (W. Limbory).	E. W. Oates, Esq. [C.]. Tweeddale Coll.
$z'$ . $\delta$ ad. sk. $a''$ , $b''$ . $\varphi$ ad. sk.	Lower Pegu, March. Salween River, August (R. C. Beavan).	E. W. Oates, Esq. [C.]. Tweeddale Coll.
e". ♂ ad. sk. d"-y". ♂ ad. et ♂♀ juv. sk. h".♀ ad. sk.	Tavoy, June (W. Davison). Amherst, July (W. D.).	Hume Coll. Hume Coll.
h''. $Q$ ad. sk.	Pahpoon, Salween, Dec. $(W. D.)$ .	Hume Coll.
i''. ♂ ad sk. k''. ♂ ad. sk.	Kyouk-nyat, Jan. (W. D.). Thoungyeen R., Feb. (C. T. Bingham).	Hume Coll. Hume Coll.
l'', m''. ♂ ad. et	Kaukaryit, Jan. (W. Da-vison).	Hume Coll.
ad. sk. n''. Ad. sk. o''. d ad. sk.	Moulmein, Oct. (W. D.). N. of Yea, March (W.	Hume Coll. Hume Coll.
$p'', q'', r''$ . $\mathcal{J}$ ad.	D.). Near Tavoy, April (W.	Hume Coll.
$p'', q'', r''$ . $\sigma$ ad. et $\varphi$ juv. sk. $s''$ . $\sigma$ ad. sk. $t''$ . $\sigma$ ad. sk.	D.). Suizway Forest, March. N. Myawadee, Jan. (W. D.).	C. T. Bingham, Esq. [P.]. Hume Coll.
$u''-x''$ . $\mathcal{J} \ Q \text{ ad. sk.}$ $y'', z''$ . $\mathcal{J} \ \text{ad. sk.}$	Mergui, Nov. (W. D.). Malawoon, Feb., Dec. (W. D.).	Hume Coll. Hume Coll.
$a^3, b^3, c^3$ . $\delta$ ad. sk.	Bankasoon, Malawoon, Dec. (W. D.).	Hume Coll.
$d^3$ . $\delta$ juv. sk. $e^3$ , $f^3$ , $g^3$ . $\delta$ ad. et $\delta$ $\circ$ juv. sk. $h^3$ . $\circ$ juv. sk.	Kossoom, May (J. Darling). Salang, Feb. (J. Darling).	Hume Coll. Hume Coll.
h³. ♀ juv. sk.	Klang, Salangore, July (W. Davison).	Hume Coll.
i³, k³. Ad. sk. l³. Ad. sk.	Saigon, Cochin China, May. Port Blair, S. Andamans.	M. E. Pierre [P.]. Hume Coll.
$m^3$ . $\mathcal{J}$ ad. sk.	Port Cornwallis, Andamans (W. Davison).	Hume Coll.
n³. ♀ ad. sk.	Macpherson's Straits, Andamans, March.	Hume Coll.
$o^3-r^3$ . $\mathcal{O}$ Q ad. sk.	Mt. Harriet, Andamans, March, Dec. (W. Davisou).	Hume Coll.
$s^3$ , $t^3$ . $\delta$ ad. sk.	Aberdeen, Andamans, Dec. (W. D.).	Hume Coll.
$u^3, v^3, w^3$ . $\delta \ $ ad. sk.	S. Andamans, July (W. D.).	Hume Coll.
$x^3, y^3, z^3$ . $Q$ ad. et juv. sk.	S. Andamans, July, Aug. (R. J. Wimberley).	Hume Coll.
a¹-d¹. ♂♀ad. sk. e¹. Skeleton.	S. Andamans, Jan., Feb. (R. G. W. Ramsay).	Tweeddale Coll.

### 2. Loriculus pusillus.

Philippine Parrot, var. A (Ind. ex Mus. Lever. ♀), Lath. Syn. i.

p. 313 (1781); id. Gen. Hist. ii. p. 267 (1822).

Psittacus vernalis, Kuhl (nec Sparrm.), Consp. Psitt. p. 65 (partim), (1820); Müll. et Schleg. Verhandel. Land- en Volkenk. pp. 107, 108 (Java) (1839-44); Dubois, Orn. Gal. pl. 60 B (1839).
Psittacus galgulus, Horsf. (nec Linn.) Tr. Linn. Soc. xiii. p. 182

(1821) (Java).

Psittacula vernalis, Steph. Gen. Zool. xiv. p. 144 (1826); Bourj. Perr. (text), p. 89 (1837-38).

Psittaculus vernalis, Sw. Zool. Ill. 2nd ser. pl. 1 (1829); id. Class. B. ii. p. 303 (1837).

Psittacula coulaci (part.), Less. Tr. d'Orn. p. 202 (femelle et jeune femelle) (1831).

Psittacula galgulus (part.), Wagl. Mon. Psitt. p. 527 (mas jun. (ad.), juvenis et av. horn.) (1832); Licht. Nomencl. Av. p. 71 (1854).

Psittaculus galgulus, Selby, Nat. Libr., Parrots, p. 167, pl. 24 (syn.

emend.) (1836).

? Loriculus vernalis, Souancé, Rev. et Mag. de Zool. 1856, p. 219; Rosenb. Journ. f. Orn. 1862, p. 60; id. Nat. Tijdschr. Ned. Ind.

xxv. p. 139 (1863).

Loriculus pusillus, G. R. Gr. List Psitt. Brit. Mus. p. 54 (1859) \*; Wall. P. Z. S. 1864, pp. 288, 294; Schley. Mus. P.-B. Psitt. p. 132 (1864); Blyth, Ibis, 1867, p. 295; G. R. Gr. Hand-list, ii. p. 152, n. 8171 (1870); Wald. P.Z. S. 1871, p. 333; id. Trans. Zool. Soc. viii. p. 27 (1872); Elwes, P. Z. S. 1873, p. 679; Schleg. Mus. P.-B. Psittaci, Revue, p. 60 (1874); Gieb. Thes. Orn. ii. p. 499 (1875); Meyer, Rowl. Orn. Misc. ii. p. 232, n. 3 (1877): Vorderm. Nat. Tijdschr. Ned. Ind. xlv. p. 317 (1885).

Psittacus amœnus, Verzeichn. Holzapfel, p. 6, n. 24 (—?).

Coryllis javanica, Finsch, Papag. ii. p. 64 (1868).

Coryllis pusilla, Finsch, Papag. ii. p. 725 (1868); Rchnw. Vogelbild. t. xv. f. 1 (2) (1878-83); id. Journ. f. Orn. 1881, p. 226 (Consp. Psitt. p. 114).

Coryllis galgulus, Vorderm. (nec Linn.) Nat. Tijdschr. Ned. Ind.

xliii. p. 91 (1883).

Adult male. Green, underneath paler, interscapulium slightly tinged with yellow; uropygium and upper tail-coverts bright red; a large yellow patch on the throat; inner web of the quills and tail underneath verditer-blue: "bill orange-yellow; cere and feet dull yellow." Total length 5 inches, wing 3.15, tail 1.3, bill 0.4, tarsus 0.4.

Female. Yellow patch on the throat paler. Hab. Java.

a. ♂ ad. sk. A. R. Wallace [C.]. W. Java. b. 3 ad. sk. W. Java (A. R. Wallace). Gould Coll. c. \$ ad. sk. Java. Gould Coll.

d. Skeleton. Java.

<sup>\*</sup> Mr. G. R. Gray was the first to recognize that the Javan Loriculus, Psittacus vernalis, Kuhl (nee Sparrm.), was distinct from the Indian one, and gave it the name of *L. pusillus*. Curiously enough, the specimen which he attributed to it in his *List*, with no locality on the label, is, no doubt, a young L. galgulus from Malacca! I cannot account for Finsch stating that it is like an adult male in the Leyden Museum!

### 3. Loriculus flosculus.

? Psittacus vernalis, part., Kuhl, Consp. Psitt. p. 65 (1820). Loriculus flosculus, Wall. P. Z. S. 1863, pp. 484, 488, 1864, pp. 288,

294; G. R. Gr. Hand-list, ii. p. 152, n. 8178 (1870); Wald. P. Z. S. 1871, p. 333; id. Tr. Zool. Soc. vii. p. 27 (1872); Gieb. Thes. Orn. ii. p. 498 (1875); Meyer, Rowl. Orn. Misc. ii. p. 233, n. 16 (1877); Tweedd. Orn. Works, p. 131 (1881).

Coryllis flosculus, Finsch, Papag. ii. p. 728 (1868); Rehnw. Journ. f. Orn. 1881, p. 226 (Consp. Psitt. p. 114); id. Lauelbild. Nachtr.

f. Orn. 1881, p. 226 (Consp. Psitt. p. 114); id. Vogelbild. Nachtr.

n. 44 (1883).

Type. Green, beneath paler; nape tinged with orange; elongated spot on throat red; rump and upper tail-coverts erimson; tail above dark green, the tips of the tail-feathers pale green, slightly stained with red; quills and tail-feathers beneath margined with verditer-blue: bill red; feet orange-red. Total length 4.75 inches, wing 3, bill 0.45, tarsus 0.35.

Hab. Flores.

a. Ad. sk. Flores. A. R. Wallace [C.]. (Type of species.)

#### 4. Loriculus exilis.

Loriculus exilis, Schleg. Ned. Tijdschr. Dierk. iii. p. 185 (1866); G. R. Gr. Hand-list, ii. p. 152, n. 8179 (1870); Wald. Tr. Zool. Soc. viii. p. 32 (1872); Schleg. Mus. P.-B. Psittaci, Revue, p. 60 (1874); Gieb. Thes. Orn. ii. p. 498 (1875); Meyer, Rowl. Orn. Misc. ii. p. 233, n. 13 (1877); Meyer & Rowl. Orn. Misc. ii. p. 243, pl. 59 (1877); Rosenb. Malay. Archip. pp. 274, 593 (1878); Meyer, Ibis, 1879, p. 52; Tweedd. Orn. Works, p. 136 (1881); Meyer, Vogel-Skelett. t. xxii. (1882); Blas. Journ. f. Orn. 1883, p. 134; Guillem. P. Z. S. 1885, p. 544; Tristr. Cat. Coll. B. p. 76 (1889). Coryllis exilis, Finsch, Papag. ii. p. 728, t. 5 (1868); Rehwe. Vogel-

bild. t. xv. f. 6 (1878-83); id. Journ, f. Orn. 1881. p. 226 (Consp.

Psitt. p. 114).

Adult male. Very much like L. flosculus, but smaller; the nape yellowish, but not orange; the red spot on the throat surrounded by a broad verditer-green area, and more or less concealed by the verditer-green edges of the feathers; tips of the tail-feathers greenish yellow, not stained with red: "eyes yellow; feet orangeyellow, somewhat reddish; bill coral-red " (Meyer). Total length 4.2 inches, wing 2.55, tail 1.2, bill 0.35, tarsus 0.32.

Female. Wants the red spot, surrounded by a bluish area, on the throat: "iris brown; bill dull red; tarsus yellow" (Guillemard).

Young. Differs from the adult in having the red colour of the rump and upper tail-coverts less extended; there is searcely a trace of the red spot on the throat.

Hab. Celebes.

a, b, c. Ad. sk. A. B. Meyer [C.]. Celebes. d, e. Ad. et juv. sk. Gould Coll. Celebes. Menado, N. Celebes (A. B. Tweeddale Coll. f, g. Ad. sk. Meyer).

### Loriculus chrysonotus.

Loriculus regulus, G. R. Gr. (nec Souancé) List Psitt. Brit. Mus. p. 56 (Mindanao) (1859); Wall. P. Z. S. 1864, p. 288; Finseh, Ibis, 1874, p. 208; Wald. Trans. Zool. Soc. ix. p. 137 (1875); Tweedd. Orn. Works, p. 304 (1881).

Coryllis regulus (part.), Finsch, Papag. ii. p. 711 (1868); id. Ibis,

1872, p. 208.

Loriculus culacissi, Sclat. (nec Vieill.) P. Z. S. 1871, p. 479; id. Rev.

List\*of Vert. p. 202 (1872).

Loriculus chrysonotus, Sclat. Ibis, 1872, p. 324, pl. xi. \* (Zebu); id. P. Z. S. 1872, p. 790; Wald. P. Z. S. 1873, p. 526; Garrod, P. Z. S. 1873, p. 634, 1874, p. 587; Gieb. Thes. Orn. ii. p. 497 (1875); Wald. Trans. Zool. Soc. ix. pp. 137, 249 (1875); Sharpe, Tr. Linn. Soc. (2) Zool. i. p. 313 (1876); Meyer, Rowl. Orn. Misc. ii. p. 232, n. 8 (1877); Tweedd. P. Z. S. 1877, pp. 539, 757, 820;
id. Orn. Works, pp. 299, 304, 410, 463, 530, 547 (1881); Wardl. Rams. Tweedd. Orn. Works, p. 655 (1881); Tweedd. Voy. Chall., Birds, p. 10 (1881); Sclat. List Vert. An. 8th ed. p. 326 (1883): Steere, List etc. p. 6 (1890).

Coryllis occipitalis (part.), Finsch, Ibis, 1874, p. 208†; Rehnw. Journ. f. Orn. 1881, p. 228 (Consp. Psitt. p. 116); id. Vogelbild.

Nachtr. 47 (1883).

Corrllis chrysonotus, Finsch, Ibis, 1874, p. 208. Loriculus occipitalis, Wald. Tr. Zool. Soc. ix. pp. 135 (note), 249 (1875); Meyer, Rowl. Orn. Misc. ii. p. 232, n. 9 (1877); Tweedd. Orn. Works, pp. 303, 410 (1881); Wardl. Rams. Tweedd. Orn. Works, p. 655 (1881).

Coryllis chrysonota, Rehnw. Journ. f. Orn. 1881, p. 229 (Consp. Psitt. p. 117); id. Voyelbild. Nachtr. 48 (1883).

Adult male (type). Green, underneath yellowish green; forehead, rump, and upper tail-coverts red; vertex, occiput, nape, and upper back golden yellow; an obsolete spot in the middle of the nape, also the upper back, tinged with orange; cheeks, sides of the head and of the neek grass-green; a large patch on the throat orange-red, the yellow colour of the base of the feathers showing through; sides of the lower back tinged with blue; quills and tail above dark green; inner web of the quills and tail beneath blue; tail-feathers tipped with light green: "iris brown; bill orange-red; feet orange" (Everett). Total length 6.2 inches, wing 3.9, tail 2, bill 0.6, tarsus 0.45.

Adult female. Differs from the male in having the anterior part of the cheeks and throat tinged with blue; no red patch on the throat; the golden-yellow tinge on the head and nape not so bright; the upper back, or interscapular region, green, slightly washed with

† Coryllis occipitalis, Finsch, is founded partly on the specimen labelled L. regulus from Mindanao (Cuming) (Gray, List Psitt. Brit. Mus. p. 56),

which turns out to be L. chrysonotus.

<sup>\*</sup> The plate is very unsatisfactory; the cheeks of the male are tinged with blue, while no such colour exists in the type; the red colour of the throat is much too dark and quite different; the tail underneath is much too deep blue, &c.

golden orange, and the blue tinge on the sides of the lower back paler.

Hab. Cebu, Philippine Islands.

a. of ad. sk.

E. Bartlett. (Type of species.)

b. ♂ ad. sk.

[Mindanao.]

Cuming Coll. (Type of L. regulus, Gr., nec Souancé, and

 $c, d, e. \ \exists \ Q \ ad. \ sk.$ f. of ad. sk.

one of the types of *C. occipitalis*, Finsch.) pril (*A. B. Meyer*). Tweeddale Coll. Cebu, April (A. B. Meyer). Cebu, April (A. H. Everett). Tweeddale Coll.

### 6. Loriculus regulus.

Loriculus regulus, Souancé, Rev. et Mag. de Zool. 1856, p. 222; orientus regulus, Souance, Kev. et May. ae Zoot. 1850, p. 222; Sclat. Ibis, 1872, p. 324 (Negros and Panay); id. P. Z. S. 1872, p. 790; Wald. P. Z. S. 1873, p. 526; Gieb. Thes. Orn. ii. p. 499 (partim) (1875); Wald. Tr. Zool. Soc. viii. p. 135 (Negros) (1875); Sharpe, Trans. Linn. Soc. (2) Zool. i. p. 313 (1876); Meyer, Rowl. Orn. Misc. ii. p. 232, n. 7 (1877); Rowl. & Meyer, ibid. p. 238, pl. 58 \* (1877); Tweedd. P. Z. S. 1877, pp. 539, 820, 1878, p. 281 (Negros); id. Orn. Works, pp. 303, 410, 587 (1881); Wardl. Rams. Tweedd. Orn. Works, p. 655 (1881); Steere, List, p. 6 (1890) p. 6 (1890).

Licmetulus regulus, Bp. Naumannia, 1856, Consp. Psitt. n. 255. Loriculus (Liemetulus) regulus, v. Mart. Journ. f. Orn. 1866, p. 21. Coryllis regulus, Finsch, Ibis, 1874, p. 207; Rehnw. Journ. f. Orn. 1881, p. 228 (Consp. Psitt. p. 116); id. Vogelbild. Nachtr. 47 (1883).

Coryllis occipitalis (part.), Finsch, Ibis, 1874, p. 208†; Rehnw. Journ. f. Orn. 1881, p. 228 (Consp. Psitt. p. 116); id. Vogelbild. Nachtr. 47 (1883).

Loriculus occipitalis (part.), Wald. Tr. Zool. Soc. ix. pp. 135 (note), 249 (1875); Meyer, Rowl. Orn. Misc. ii. p. 232, n. 9 (1877); Tweedd. Orn. Works, pp. 303, 410 (1881); Wardl. Rams. Tweedd.

Orn. Works, p. 655 (1881). Loriculus panayensis, Tweedd. P. Z. S. 1877, pp. 536, 538; id. Orn. Works, p. 462 (1881); Wardl. Rams. ibid. pp. 655, 667 (1881); Tweedd. Voy. Chall., Birds, p. 9, pl. 1, f. 1, 2 (1881). Coryllis panayensis, Rchnw. Journ. f. Orn. 1881, p. 227 (Consp. Psitt. p. 115); id. Voyelbild. Nachtr. 45 (1883).

Adult male. Grass-green, underparts lighter; sinciput bright red; vertex golden yellow; at the base of the nape a spot, or in skins a transverse band, golden orange; rump and upper taileoverts red; sides of the rump light blue; a large patch on the throat orange-red, with the bases of feathers yellow; quills black,

<sup>\*</sup> The plate quoted is very unsatisfactory; the golden-yellow vertex, which ought to be sharply defined, is scarcely distinct, the spot on the lower nape is too red, and should be orange and less distinct, and the red patch on the throat ought to be much larger.

<sup>†</sup> Dr. Finsch, in his Coryllis occipitalis, besides a specimen of Loriculus chrysonotus, as before stated, includes also a second, labelled in the British Museum as L. regulus, from unknown locality. I have been able to ascertain that this is the type, or a typical specimen, of L. regulus, Souancé, of the Massena Collection, received through the dealer Parzudaky of Paris.

on the outer web dark green, beneath verditer-blue like the greater under wing-coverts; the other under wing-coverts green; tail above dark green, tipped with light green, beneath verditer-blue: "bill orange-red; cere orange; feet lighter orange" (Everett). Total length about 6.2 inches, wing 3.5 to 3.6, tail 1.8, bill 0.6, tarsus 0.4.

Adult female. Like the male; the forehead also red, but the vertex green, with a very slight tinge of yellow near the forehead; cheeks and feathers near the base of the lower mandible tinged more or less with light blue; an orange patch on the lower nape as in the male; no orange-red patch on the throat, which is yellowish green; bill and feet as in the male.

Young. Duller green; head entirely green, no yellow patch on the nape; the rump and upper tail-coverts duller red, the last shorter than in the adult birds; no bluish tinge on the sides of the

rump: "feet dirty ochre-yellow" (Everett).

Hab. Negros and Panay.

a. Ad. st.		Massena Coll. of species, and one of the of <i>C. occipitalis</i> , Finsch.)
b, c. J ad. et imm. sk.	Negros, March (A. B. Meyer).	
$d$ - $i$ . $\beta \ Q$ ad. et imm. sk.	Negros, March (A. B. Meyer).	Tweeddale Coll.
k. d imm. sk.	Negros.	A. B. Meyer [C.].
l, m. ♂ ad. sk.	Valencia, Negros, August (A. II. Everett).	Tweeddale Coll.
n-q. ♂♀ad. et ♀ imm. sk.	Dumaguete, Negros, August (A. H. Everett).	Tweeddale Coll.
r. 3 juv.	Dumaguete, Negros, Feb.	E. L. Moseley [C.].
8. 3 ad. sk.	Panay, March (A. B. Meyer).	
t, u. ♂♀ad. sk.	Ilo-Ilo, Panay.	'Challenger' Exped. (Types of $L$ . panayensis.)

# 7. Loriculus philippensis.

Psittacula philippensis, Briss. Orn. iv. p. 392, pl. xxx. f. 1 (1760);
Steph. Gen. Zool. xiv. 2, p. 144 (1826); Meyen. Nov. Act. C. L.-C.
Nat. Cur. xvi. Suppl. prim. p. 94 (1834); Bourj. Perr. pl. 89 (lower fig.) (1837–38); Licht. Nomenel. Av. p. 71 (1854).

Perruche des Philippines, Daubent. Pl. Enl. 520. f. 1.

Psittacus philippensis, *L. S. Müll. S. N. Suppl.* p. 80, n. 68 (1776) (ev. Buffon?); Voigt, Cuv. Uebers. p. 747 (1831); Kuhl, Consp. Isitt. p. 64 (1820).

? Petite Perruche de l'isle de Luçon, quatrième espèce, Sonner. Voy. à la Nouv. Guin. p. 77, tab. 40 (upper figure, Q) (1776).

Le Coulacissi, Buff. Hist. Nat. Ois. vi. p. 169 (1779).

La Perruche à ailes noires, Buff. Hist. Nat. Ois. vi. p. 174 (1779) (ex Sonnerat).

Philippine Parrakeet, *Lath. Syn.* i. p. 311 (1781); *id. Gen. Hist.* ii. p. 266 (♀) (1822).

Luzonian Parrakeet, Lath. Syn. i. p. 318 (1781) (ex Sonnerat); id. Gen. Hist. ii. p. 271 (1822).

P Sittacus melanopterus, Scop. Del. Flor. et Faun. Insubr. p. 86, n. 23 (♀) (1786) (ex Sonnerat).

Psittacus galgulus, var.  $\beta$ , Gm. S. N. i. p. 349, n. 46 (1788) (e.v. Brisson); Lath. Ind. Orn. i. p. 131, n. 148 (1788); Shaw, Gen. Zool. viii. 2, p. 550 (1811).

? Psittacus minor, Gm. S. N. i. p. 351, n. 135 (1788) (ex Sonnerat); Lath. Ind. Orn. i. p. 133, n. 155 (1790); Vieill. Enc. Méth. iii. p. 1404 (1823).

Psittacus coulacissi, Vieill. Enc. Méth. iii. p. 1405 (1823).

Psittacula coulaci, part., Less. Tr. d'Orn. p. 202 (1831). Psittacula rubrifrons, Vig. Phil. Mag. 1831, p. 147 (\$\varphi\$); Lear, Parrots, pl. 41 (1832); Bourj. Perr. pl. 87 (1837–38) (ex Lear).

Psittacula rubrifrons, Vig. P. Z. S. 1831, p. 97.

Psittacula culacissi, Wagl. Mon. Psitt. p. 627 (1832). Psittaculus rubrifrons, Sw. Class. B. ii. p. 303 (1836).

Psittacula melanoptera, G. R. Gr. Gen. B. ii. p. 423, n. 16 (1846). Loriculus rubrifrons, Bp. Rev. et May. de Zool. 1854, p. 155, n. 242;

Hartl. Journ. f. Orn. 1854, p. lxiii.

Loriculus philippensis, Souancé, Rev. et May. de Zool, 1850, p. 221; Schley, Mus. P.-B. Psittaci, p. 130 (1864); v. Mart. Journ. f. Orn. 1866, p. 21; op. cit. Revue, p. 59 (1874); Wald. Tr. Zool. Soc. ix. pp. 135, 249 (1875); Tweedd. P. Z. S. 1877, p. 820; id. Orn. Works, pp. 299, 303, 304, 410, 547 (1881); Wardl. Rams. Tweedd. Orn. Works, p. 655 (1881); Tristr. Cat. Coll. B. p. 76 (1889); Steere, List, p. 6 (1890).

Liemetulus philippensis, Bp. Naumannia, 1856, Consp. Psitt. n. 254. Loriculus culacissi, G. R. Gr. List Psitt. Brit. Mus. p. 56 (1859);
Wall. P. Z. S. 1864, p. 288; Gieb. Thes. Orn. ii. p. 498 (1875);
Meyer, Rowl. Orn. Misc. ii. p. 232, n. 6 (1877); id. Voyel-Skelett.

t. ii. (1879).

? Loriculus melanopterus, Wall. P. Z. S. 1864, pp. 288, 294.

Coryllis culacissi, Finsch, Papag. ii. p. 705 (1868).

Licmetulus culacissi, G. R. Gr. Hand-list, ii. p. 152, n. 8181 (1870). Coryllis philippensis, Rehnw. Journ. f. Orn. 1881, p. 228 (Consp. Psitt. p. 116); id. Vogelbild. Nachtr. 47 (1883).

Adult male. Grass-green, underparts lighter; sinciput bright red, bordered behind, more or less distinctly, with yellow; a slight vellow tinge more or less distinct on the vertex; on the nape a spot, or in skins a transverse patch, golden orange; rump and upper tail-coverts red; sides of the rump light blue; a large patch on the throat orange-red, with yellow bases to the feathers; quills black, on the outer web dark green, beneath verditer-blue, like the greater under wing-coverts and the tail beneath; tail above dark green, tipped with light bluish green: "eyes brown; feet orange; bill red" ('Challenger'). Total length about 6 inches, wing 3.6, tail 1.7, bill 0.6, tarsus 0.4.

Adult female. Differs from the adult male in having the anterior part of the cheeks and the feathers near the base of the lower mandible tinged with blue; the underparts yellowish green, with no

orange-red patch on the throat.

Hab. Luzon.

Philippines. Luzon (A. B. Meyer). Manilla (A. B. Meyer). Manilla (Maitland-Heriot). Cuming Coll. Tweeddale Coll. Gould Coll. Tweeddale Coll.

### S. Loriculus mindorensis.

Loriculus mindorensis, Steere. List B. & M. Steere Exped. to the Philipp. p. 6 (1890).

Adult. Green, paler yellow; the head bright green, the back with a slight tinge of yellow; a crimson band across the forehead, ending sharply in the green of the vertex; rump and upper tail-coverts red; sides of the rump blue; a large patch on the throat orangered, with the base of the feathers yellow; middle of the abdomen and under tail-coverts yellowish green; quills black, with the outer web dark green, the inner web underneath, and the tail below, blue; tail above dark green, tipped with yellowish green; bill orangered; feet yellow (?). Total length 6.2 inches, wing 3.7, tail 1.72, bill about 0.6, tarsus 0.43.

Hab. Mindoro.

Besides a typical specimen, there is in the British Museum a second specimen apparently belonging to the same species: although fully adult, it has the head rather paler green; the dimensions are a little smaller; it is labelled as from Manilla, but there is no collector's name to corroborate the statement.

a. ♂ ad. sk.b. ♂ ad. sk.

Calapan, Mindoro, May (E. L. Moseley).
[Manilla.]

Steere Exped. (Typical specimen.)
Gould Coll.

## 9. Loriculus siquijorensis.

Loriculus siquijorensis, Steere, List B. & M. Steere Exped, to the Philipp. p. 6 (1890).

Adult male. Green, "with large quadrangular spot of crimson upon the forehead and crown, ending sharply in the general green of the upper surface" (Steere); rump and upper tail-coverts red; underparts yellowish green; a patch on the throat red, with the base of the feathers yellow; primaries on the outer web and tail above dark green; lateral tail-feathers towards the apex blue, and tipped with light bluish green; inner web of the quills below and tail beneath blue; bill orange-red; feet yellow (?). Total length 6.5 inches, wing 4, tail 2, bill 0.62, tarsus 0.46.

Adult female and young male. "Red spot upon the forehead veiled by blue tips to the red feathers" (Steere); cheeks and throat tinged with blue; no red patch on the throat; tail as in the male.

Hab. Siquijor (between Cebu and Mindanao), Philippines.

a, b. ♂♀ ad. sk.

Siquijor, Feb. (F.  $\delta$ . Bourns).

Steere Exped. (Typical specimens.)

#### 10. Loriculus indicus.

The smallest Green and Red Indian Paroquet, Edw. i. pl. 6 (1745); Seligm. Samml. Ausländ. Vög. i. pl. xi. f. 1 (1749 (from Edwards). Psittacula indica, Eriss. Orn. iv. p. 390 (1760).

Red and Green Indian Parrot, Lath. Syn. i. p. 311 (1781); id. Gen.

Hist. ii. p. 264 (1822).

Psittacus indicus, Gm. S. N. i. p. 349, n. 128 (nec n. 58) (1788) (ex Brisson); Bechst. Kwze Uebers. p. 104 (1811); Kwhl, Consp. Psitt. p. 65 (♂ nec ♀) (1820); Voigt, Cuv. Uebers. p. 747 (1831). Psittacus asiaticus, Lath. Ind. Orn. i. p. 130, n. 146 (1790): Shar,

Gen. Zool. viii, 2, p. 553 (1811); Vieill. Enc. Méth. iii. p. 1407 (1823).

Psittacula indica, part., Steph. Gen. Zool. xiv, 2, p. 144 (syn. emend.) (1826); G. R. Gr. Gen. B. ii. p. 423, n. 17 (1846).

Psittacula coulaci, part., Less. Tr. d'Orn. p. 202 (male) (1831). Psittacula minor, part., Wagl. Mon. Psitt. p. 628 (male) (1832). Psittacula philippensis, Bourj. Perr. pl. 89 (upper fig.) (1837–38).

Psittacus indicus vel minor, Bourj. Perr. text, p. 89 (1837-38). Loriculus philippensis, Blyth (nec Briss.), Cat. B. Mus. A. S. B.

p. 10, n. 46 (Ceylon) (1849).

Loriculus asiaticus, Blyth, op. cit. p. 312 (1849); id. Journ. A. S. B.
xviii. p. 801 (1849), xix. p. 236 (1850); Kelaart, Prodv. Faun.
Ceyl. p. 127 (1852); Layard, Ann. & Mag. N. H. (2) xiii. p. 261 (1854); Hartl. Journ. f. Orn. 1854, p. 158; Horsf. & Moore, Cat. B. Mus. E. I. Comp. ii. p. 628 (1856): Wald. P. Z. S. 1866, p. 539; Garrod, P. Z. S. 1873, p. 634, 1874, p. 587; Tweedd. Orn.

Works, p. 17 (1881); Sclat. List Vert. An. 8th ed. p. 326 (1883). Loriculus indicus, Bp. Rev. et Mag. de Zool. 1854, p. 155, p. 240; Souancé, Rev. et Mag. de Zool. 1856, p. 219, p. 175, p. 220, (mâle nec femelle), p. 221 (Ceylon); Bp. Naumannia, 1856, Consp. Psitt, n. 247; Cass. Narr. Exp. under Comm. Perry, p. 242 (1856); Journ. f. Orn. 1858, p. 449; G. R. Gr. List Psitt. Brit. Mus. p. 55 (1859); Schleg. Mus. P.-B. Psittaci, p. 132 (1864); Pelz. Novara Reise, Vög. p. 99 (1865); G. R. Gr. Hand-list, ii. p. 152, n. 8173 (1870): Holdsw. P. Z. S. 1872, pp. 405, 426; Legge, Ibis, 1874, p. 15; Hume, Str. Feath. ii. p. 186 (1874); Schleg. Mus. P. P. Psittoi, Review p. 60 (1871); Legge Str. List. P.-B. Psittaci, Revue, p. 60 (1874); Legge, Str. Feath. iii. p. 365 (1875); Gieb. Thes. Orn. ii. p. 498 (1875); Meyer, Rowl. Orn. Misc. ii. p. 232, n. 2 (1877); Tweedd. P. Z. S. 1877, p. 820; Hume, Str. Feath. vii. p. 368 (1878), viii. p. 87, n. 153 bis (1879); Legye, B. of Ceyl. pp. 180, 1212, pl. iv. lower fig. (ad.), pl. vii. upper fig. (young) (1880); Tweedd. Orn. Works, pp. 546, 547 (1881); Tristr. Cat. Coll. B. p. 76 (1889).

Loriculus puniculus (sinensis), Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 241; Souancé, Rev. et Mag. de Zool. 1856, pp. 219, 221; Bp. Naumannia, 1856, Consp. Psitt. n. 250; G. R. Gr. List Psitt. Brit. Mus. p. 55 (1859)\*; Sclat. Ibis, 1860, p. 361 (note); Swinh. Ibis, 1861, p. 411, 1862, p. 305; G. R. Gr. Hand-list, ii. p. 152, n. 8174 (1870); Swinh. P. Z. S. 1871, p. 391.

Loriculus coulaci, Blyth, Ibis, 1863, p. 7, 1867, p. 226. Loriculus edwardsi, Blyth, Ibis, 1867, pp. 295, 311; Wald. Ibis, 1867, p. 46; Nevill. Journ. A. S. B. (Ceyl. Br.) 1870-71, p. 32; Tweedd. Orn. Works, p. 49 (1881).

Corvllis indica, Finsch, Papag. ii. p. 714 (1868); Rehnw. Journ. f. Orn. 1881, p. 227 (Consp. Psitt. p. 115); id. Vogelbild. Nachtr. 46 (1883).

<sup>\*</sup> It is difficult to say what Bonaparte meant by his Loriculus puniculus; Mr. Gray attributed to this species two specimens which he puts down as from China (Fortune's Collection), whereas they are from Ceylon, and were collected by Mr. Thwaites.

Adult male. Green, underneath paler; pileum, uropygium, and upper tail-coverts red; nape and interscapular region tinged with orange; lores, cheeks, chin, and throat tinged with bluish; inner webs of the quills and tail underneath verditer-blue: "iris white; bill light orange-red, paler at the tip; lower mandible paler than the upper; legs and feet dusky yellow; cere yellow" (Legge). Total length 5.7 inches, wing 3.7, tail 1.6, bill 0.58, tarsus 0.4.

Adult female. Like the male.

Young. Forehead greenish grey, vertex slightly tinged with orange; interscapular region green, with scarcely any orange tinge; cheeks green, with no bluish tinge; a very slight tinge of blue on the throat.

Hab. Ceylon.

J. Brenchley, Esq. [P.]. Dr. Kelaart [C.]. a. Ad. st. b. Ad. sk. Ceylon. c. d. Ad. sk. Thwaites Coll. (Types Ceylon. of L. puniculus, Gr.)\* Hume Coll. e, f, g. 3 ad. et Cevlon, Nov. (Messrs. Hart  $\delta$  var. sk.  $h, i. \circ 2$  ad. sk. Bros.). Ceylon. Hume Coll. Ceylon, April, July, Dec. (S. Chapman).  $k, l, m. \beta$  ad. Tweeddale Coll. sk. n, o. ♂♀ ad. sk. Ceylon, Dec. (S. Chapman). Lord Walden [P.]. p-a'. Ad. et imm. Cevlon (H. Neville). Tweeddale Coll. et (var.) sk. b'. ♀ ad. sk. Col. W. V. Legge [P.]. Col. W. V. Legge [P.]. Ceylon, March. c'. d ad. sk. d'. Imm. sk. N.W. Provinces, Feb. [Mindanao.] Cuming Coll. e', f'. Imm. sk. Gould Coll.†

# 11. Loriculus apicalis.

P Petite Perruche de l'isle de Luçon, Sonn. Voy. Nouv. Guin. p. 77, pl. 40 (fig. inf. ♂) (1776).

? Psittacus melanopterus, Scop. Del. Flor. et Faun Insubr. ii. p. 86,

n. 23 (3) (1786) (ex Sonnerat). Loriculus indicus, A, Souancé, Rev. et Mag. de Zool. 1856, p. 220

(partim).

Loriculus apiealis, Souancé, Rev. et Mag. de Zool. 1856, pp. 220, 221 (Mindanao); Bp. Naumannia, 1856, Consp. Psitt. n. 249; Wall. P. Z. S. 1864, pp. 288, 294; v. Mart. Journ. f. Orn. 1866, p. 21; G. R. Gr. Hand-list, ii. p. 151, n. 8176 (1870); Legge, B. of Ceyl. p. 181 (1880).

? Loriculus sp., Souancé, l. c. p. 221.

? Lorieulus cyanolæmus, Bp. Naumannia, 1856, Consp. Psitt. n. 248 (ex Souancé).

\* See footnote on previous page.

<sup>†</sup> The last three specimens have the appearance of having been skinned by the same person; they agree with the others except in the wing, which is a little longer, so that I am not quite satisfied whether they belong to *L. indicus*. Dr. Finseh has already alluded to the specimen labelled *Mindanao* (Papag. ii. p. 717).

Loriculus melanopterus, G. R. Gr. (nec Scop.?) List Psitt. Brit. Mus. p. 55 (Mindanao); v. Mart. Journ. f. Orn. 1866, p. 21;

G. R. Gr. Hand-list, ii. p. 152, n. 8175 (1870).
Coryllis hartlaubi (part.), Finsch, Papag. ii. p. 711 (Ω) (1868).
Loriculus hartlaubi, Wald. P. Z. S. 1873, p. 526; id. Tr. Zool. δοc. ix. pp. 131, 249 (Mindanao) (1875); Meyer, Rowl. Orn. Misc. ii. p. 233, n. 10 (1877); Tweedd. P. Z. S. 1877, p. 819, pl. kxxxii. f. 1 σ, 2 Ω (Mindanao), 1878, pp. 107, 340 (?) (South Leyte, variety), 709 (Robol), 937 (Zambacawa), 1870, 68 (Parilla), i. 2 Ω. 709 (Bohol), 937 (Zamboanga), 1879, p. 68 (Basilan); id. Orn. Works, pp. 299, 303, 304, 410, 545, 546, 547, 566, 595, 621, 628, 646 (1881); Wardl. Rams. Tweedd. Orn. Works, p. 655 (Leyte, Bohol, Dinagat, Bazol, Mindanao, Basilan) (1881); Rutter, Com 1882, p. 964, Stern Lister (1800). Journ. f. Orn. 1883, p. 294; Steere, List, p. 6 (1890).

Coryllis apicalis, Rehnw. Journ. f. Orn. 1881, p. 229 (Consp. Psitt.

p. 117); id. Vogelbild. Nachtr. 49 (1883).

Loriculus bonapartei (part.), Guillem. P. Z. S. 1885, p. 252.

Loriculus worcesteri, Steere, List B. & M. Steere Exped. to the *Philipp*, p. 6 (1890).

Adult male. Green; erown red, changing into orange on the nape; back and scapulars washed more or less with golden; rump and upper tail-coverts rich crimson; sides of the rump tinged with bluish; cheeks and underparts yellowish green; a red patch on the throat, with the base of the feathers yellow; quills black, dark green on the outer web, blue on the inner web below; tail above green, the lateral feathers blue towards the tip, and tipped with pale bluish green; tail underneath blue: "iris brown, bill redorange; eere and feet orange" (Everett). Total length 5.8 inches, wing 3.6, tail 1.7, bill 0.6, tarsus 0.4.

Female. Differs from the male in having the lores, cheeks, chin, and upper throat pale blue, and no red patch on the lower throat

and upper breast.

Young. Crown-feathers green at the base and tipped with orange, instead of red; the back pure green, not suffused with yellow, the uropygium less intense crimson, mixed more or less with green; cheeks, chin, and throat green, but in a second stage these parts become more and more tinged with blue.

Hab. Samar, Leyte, Bohol, Dinagat, Bazol, Mindanao, Basilan,

and, apparently, also Panay.

Massena Coll. a. Ad. sk. Philippines. (Type of species and one of the types of C. hartlaubi, Finsch.) Sir E. Belcher [P.]. b. Ad. sk. c. d imm. sk. Panay, Jan. (D. Worcester). Steere Expedition. d. of ad. sk. Samar, April (E. L. Moseley). Steere Expedition. e. ♂ juv. sk. f-l. ♂ ♀ ad. et ♂ imm. sk. Tweeddale Coll. S. Leyte, July (A. H. Everett). Amparo, S. Leyte, July (A. H. Tweeddale Coll. Everett). Bohol, Oct. (A. H. Everett). Tweeddale Coll. Dinagat Is., June, July (A. H. Tweeddale Coll. n-r.  $\mathcal{J} \supseteq \mathrm{ad.} \mathrm{sk}$ . Everett). Bazol Is., July (A. H. Everett). Tweeddale Coll. s. d imm. sk. 2 MVOL. XX.

 $t, u. \ \mathcal{J} \ \text{ad. et}$   $\mathcal{J} \ \text{imm. sk.}$   $v-d'. \ \mathcal{J} \ \mathcal{P} \ \text{ad. et}$  imm. sk.  $e'. \ \mathcal{P} \ \text{imm. sk.}$   $f'. \ \text{Ad. sk.}$ 

Placer, N. Mindanao, July (A. Tweeddale Coll. H. Everett).
Butuan, N. Mindanao, May (A. Tweeddale Coll. H. Everett).
Mindanao, Oct. (F. S. Bourns). Steere Expedition.

Mindanao.

(Type of L. melanopterus, Gray, and one of the types of C. hartlaubi, Finsch.)

g'-k'.  $\circ \circ \circ$  ad. et imm. sk. Zamboanga, S.Mindanao, April, Tweeddale Coll. May  $(A.\ H.\ Everett)$ . Tweeddale Coll.\*

### 12. Loriculus bonapartei.

Loriculus bonapartei, Souancé, Rev. et Mag. de Zool. 1856, p. 222; G. R. Gr. List Psitt. Brit. Mus. p. 56 (1859); Wall. P. Z. S. 1864, pp. 228, 294; Gieb. Thes. Orn. ii. p. 497 (1875); Meyer, Rowl. Orn. Misc. ii. p. 232, n. 5 (1877); Tweedd. P. Z. S. 1871, p. 820; id. Orn. Works, p. 546 (1881); Guillem. P. Z. S. 1885, p. 252 (partim); Salvad. Ibis, 1891, p. 48, pl. iii.

Liemetulus bonapartii, *Bp. Naumannia*, 1856, *Consp. Psitt.* n. 253; *G. R. Gr. Hand-list*, ii. p. 152, n. 8183 (1870).

Coryllis bonapartei, Finsch, Papág. ii. p. 703 (1868); Rchnw. Journ. f. Orn. 1881, p. 321 (Consp. Psitt. p. 119); id. Vogelbild. Nachtr. 54 (1883).

Adult male. Green, underparts a little lighter; head above red, searlet on the forehead, shading off into a rich orange on the occiput; rump and upper tail-coverts red; a large patch on the throat also red; outer web of the primaries and tail-feathers dark green, the last tipped with lighter green; inner webs of the quills underneath and under surface of the tail-feathers verditer-blue; bill horny black; feet in the dried skin dusky, nearly black. Total

#### \* Loriculus, sp.

Loriculus apicalis, G. R. Gr. (nec Sonancé) List Psitt. Brit. Mus. p. 56, spec. a (Mindanao, Cuning) (1859); Tweedd. P. Z. S. 1877, p. 821; id. Orn. Works, p. 547 (1881).

Coryllis hartlaubi (part.), Finsch, Papag. ii. pp. 712, 721 (1868).

a. Q ad. sk.

Mindanao.

Cuming Coll.

I have not been able to identify the above bird, which seems a fully adult female; it is the specimen mentioned as *L. apicalis* by Gray (*l. c.*), and of which Mr. Sharpe, writing to the Marquis of Tweeddale, said that it is somewhat larger than *L. melanopterus* (= apicalis, Sonancé), though he woudered that it had been separated.

It is about the size of *L. siquijorensis*; in colouring it comes near the female of *L. apicalis*, but has the red of the crown not reaching the occiput; the tail above shows much blue towards the tip of the lateral feathers. I add the description of the specimen, which is not in very good condition:—

Green; forehead and vertex red; nape with a slight tinge of orange; checks and throat blue; rump and upper tail-coverts red; tail green above, the lateral feathers blue towards the tip; tail underneath deep blue; bill orange. Total length 6.5 inches, wing 3.85, tail 1.75.

length about 6 inches, wing 3.7, tail 1.95, bill 0.6, tarsus 0.42. (Museum Rothschild.)

Female. No gular red patch, lores and cheeks blue. (Museum Rothschild.)

Hab. Sooloo Islands.

I am indebted to the Hon. Walter Rothschild for having sent to me for comparison four of the five specimens collected in the Sooloo Islands by Dr. Guillemard and Mr. Powell, and three more collected by Dr. Platen. I have recently shown that the bill of this species, contrary to Dr. Guillemard's statement, is black.

Dr. Guillemard is certainly wrong also in considering the Sooloo bird identical with the one from Leyte, Bohol, Dinagat, Mindanao, and Basilan, as, besides the different colouring of the bill, it is larger, and has the tail dark green above, with no blue towards the end of the feathers, a feature which is constant in L. apicalis from the Philippines.

### 13. Loriculus galgulus.

Psittacus galgulus, Linn. Amen. Acad. iv. p. 236 (1754); id. S. N. i. p. 150, n. 46 (syn. emend.) (1766); Gm. S. N. i. p. 349, n. 46 (without var. β) (1788); Lath. Ind. Orn. i. p. 131, n. 148 (without var. β) (1790); Shaw, Gen. Zool. viii. 2, p. 550 (without var.) (1811); Bechst. Kurze Ueb. p. 105 (1811); Kuhl, Consp. Psitt. p. 65 (1820); Raffl. Trans. Linn. Soc. xiii. p. 281 (1822); Donov. Natural. Reposit. i. pl. 17 (1822); Vieill. Enc. Méth. iii. p. 1407 (1823); Voigt, Cuv. Uebers. p. 746 (1831); Bourj. Perr. p. 89 (1837–38); S. Müll. Verh. Land- en Volkenk. pp. 107, 108, 381 (1839-44).

Sapphire-crowned Parrakeet, Edw. Glean. vi. p. 293, f. 1 (1760);

Lath. Gen. Hist. ii. p. 266 (1822).

Petite Perruche de l'Isle de Luçon, première espèce, Sonner. Voy. à la Nouv. Guin. p. 76, pl. 38 (lower fig.) (1776). Petite Perruche du Pérou, D'Aubent. Pl. Enl. 190. f. 2.

La Perruche à tête bleue, Buff. Hist. Nat. Ois. vi. p. 123 (1779). Philippine Parrakeet, var. A, Sapphire-crowned Parrakeet, Lath. Syn. i. pp. 312, 313 (1781).

Psittacula philippensis, Bodd. (nec Briss.) Tabl. des Pl. Enl. p. 12

(1783).

Psittacus pumilus, Scop. Del. Flor. et Faun. Insubr. p. 87, n. 26

(1786) (ex Sonnerat).

Psittacula galgula, Steph. Gen. Zool. xiv. 2, p. 144 (1826); Less. Tr. d'Orn. p. 202 (1831); Vig. P. Z. S. 1831, p. 36; Strickl. P. Z. S. 1842, p. 167.

Psittacula galgulus, *Wayl. Mon. Psitt.* p. 626 (ad. male only) (1832); *Hartl. Syst. Verz. Ges. Mus.* p. 88 (1844); *G. R. Gr. Gen. B.* ii. p. 423, n. 14 (1846); *Pelz. Novara Reise, Vöy.* p. 99 (1865).

Psittaculus galgulus, Sw. Class. B. ii. p. 303 (1836); Selby, Nat. Libr., Parrots, p. 168 (descr. of the ad. male) (1836); Less. Compl. de Buff. ix. p. 211 (1837).

Psittacula cyaneopileata, Bourj. Perr. pl. 88 (1837-38).

Loriculus pumilus, Blyth, Cat. B. Mus. A. S. B. p. 9, n. 45 (1849); id. Ibis, 1862, p. 388. 2 m 2

Loriculus galgulus, Elyth, J. A. S. B. xviii, p. 801 (1849), xix. p. 236 (1850); Bp. Consp. Av. i. p. 6 (1850); id. Rev. et Mag. de Zool. 1854, p. 155, n. 238; Souancé, Rev. et Mag. de Zool. 1856, pp. 219, 223; Bp. Naumannia, 1856, Consp. Psitt. n. 251; Horsf. & Moore, Cat. B. Mus. E.I. Comp. ii. p. 626 (1856); Bolle, Journ. f. Orn. 1856, p. 170; Cass. Narr. Exped. Perry, p. 242 (Ceylon!) (1856) (Journ. f. Orn. 1858, p. 449); Moore, P. Z. S. 1859, p. 454; G. R. Gr. List Psitt. Brit. Mus. p. 54 (1859); Rosenb. Journ. f. Orn. 1862, p. 60; id. Nat. Tijdschr. Ned. Ind. xxv. p. 139 (1863); Blyth, Ibis, 1863, p. 6; Sclat. P. Z. S. 1863, p. 208; Wall. P. Z. S. 1864, pp. 287, 294; Schleg. Mus. P.-B. Psittaci, p. 131 (1864); ? Swinh. Ibis, 1866, p. 130; Blyth, Ibis, 1867, p. 295; G. R. Gr. Hand-list, ii. p. 151, n. 8169 (1870); Stoliczka, Journ. A. S. B. xxxix. p. 282 (1870); Wald. Ibis, 1871, p. 161; Garr. P. Z. S. 1874, p. 587; Salvad. Cat. Ucc. di Bora. p. 26 (1874); Schleg. Mus. P.-B. Psittaci, Revue, p. 62 (1874); Gieb. Thes. Orn. ii. p. 498 (1875); Sharpe, Ibis, 1876, p. 36; Brügg. Abh. Brem. v. p. 454 (1876); Meyer, Rowl. Orn. Misc. ii. p. 232, n. 4 (1877); Tweedd. Ibis, 1877, p. 292; Rosenb. Malay. Archip. pp. 108, 220 (Nias) (1878); Hume, Str. Feath. viii. p. 51 (1879); Sharpe, P. Z. S. 1879, p. 325 (var.), 1881, p. 791; Kelh. Ibis, 1881, p. 287 (Pulo Battam); Tweedd. Orn. Works, pp. 101, 482 (1881); Bock, Ibis, 1882, p. 476; Salv. Cat. B. Strickl. Coll. p. 459 (1882); Nichols. Ibis, 1883, pp. 88, 239; Sclat. List Vert. An. 8th ed. p. 326 (1883); Blas. Verh. z.-b. Ges. Wien, xxxiii, p. 23 (1883); Snellem. Sum. Exp., Vog. p. 32 (1884); Guillem. P. Z. S. 1885, p. 404; Büttik. Not. Leyd. Mus. ix. p. 12 (1886); Vorderm. Nat. Tijdschr. Ned. Ind. xlvi. p. 224 (1886); Salvad. Ann. Mus. Cir. Gen. (2) iv. p. 518 (1887); Vorderm. Nat. Tijdschr. Ned. Ind. l. p. 421 (1890). Covrllis galgulus. Finsch. Panaa. ii. p. 699 (1868); Brehm, Journ.

Coryllis galgulus, Finsch, Papag. ii. p. 699 (1868); Brehm, Journ. f. Orn. 1869, p. 138; Sunder. Meth. nat. Av. disp. Tent. p. 71 (1872); Rehnw. Vogelbild. t. xv. f. 2 (1878–83); id. Journ. f. Orn.

1881, p. 229 (Consp. Psitt. p. 118).

Adult male. Green; a deep blue spot on the middle of the crown; a golden yellow triangular spot on the interscapular region; a bright yellow band across the lower back; rump and upper tail-coverts scarlet-red; a large scarlet-red patch on the throat; wings and tail above green; greater under wing-coverts, inner web of the quills underneath, and tail beneath verditer-blue; tail-feathers tipped with yellowish green: "bill and cere black; iris deep brown; feet buffy brown" (Davison). Total length about 5·2 inches, wing 3·3, tail 1·4, bill 0·45, tarsus 0·38.

Adult female. Different from the male; the green colour duller and more yellowish on the underparts; blue spot on the middle of the crown duller; orange patch on the interscapular region nearly obsolete; no yellow band across the lower back; rump and upper tail-coverts duller red, the last shorter than in the male; no red

patch on the throat.

Young. Dull green, all the feathers with narrow dusky edges; forehead grey, with a bluish tinge on the sides; no blue spot on the crown; no orange patch on the interscapular region; rump

green, with the edges of the feathers dull red: "bill, cere, legs, and feet dull yellow; bill shaded dusky" (Davison).

Hab. Malay Peninsula from the Wellesley Province down to

Singapore, Sumatra, Nias, Bangka, and Borneo.

*a*, *b*. Ad. sk. Wellesley Province, Nov., Dec. Hume Coll. (F. Stoliczka). Klang, Selangore, March, July, Hume Coll. c-f.  $\mathcal{F} \supseteq ad$ . et imm sk. Aug. (W. Davison).g-m.  $\mathcal{J} \ \Omega$  ad. sk. Dingding Is., Feb. (W. Davi-Hume Coll. son).Malacca (Cantor). India Museum [P.]. n, o, p. Ad. sk. q. d juv. sk. r-w. Ad. et imm. Wallace Coll. Malacca. Malacca, July, Aug. Hume Coll. sk. x-p''.  $\mathcal{F} \$ ad. et Johore, Aug., Nov. (W. Davi-Hume Coll. imm. sk. q'', r''.  $\mathcal{J} \ \mathcal{Q}$  ad. Singapore Is., Aug. (W. Davi-Hume Coll. et imm. sk. son). s''. Q ad. sk. t'', u''. Ad. sk. Singapore. Gould Coll. Sumatra (Raffles). India Museum [P.]. v". Ad. sk. [Java.] East India Co. [P.]. w''. Ad. sk. Darjeeling. Wallace Coll. x''. Ad. sk.  $y''-d^3$ . Ad et India Museum [P.]. Sumatra. Sept., Oct. (Carl Tweeddale Coll. Sumatra, imm. sk. Bock).  $e^3, f^3, g^3$ . Ad. sk. Lampong, S.E. Sumatra (E. C. Tweeddale Coll. Buxton).  $h^3$ . Juv. sk. Billiton. Tweeddale Coll.  $i^3$ ,  $k^3$ .  $d \circ ad$ . Sibu, Jan. A. H. Everett, Esq. [C.]. sk.  $l^3$ . Ad. sk. Tweeddale Coll. Sarawak.  $m^3$ . Ad. sk. Sarawak (Brooke). Gould Coll.  $n^3$ . Ad. sk. Brunei River. Bassett Smith, Esq. [P.]. Tweeddale Coll. o<sup>3</sup>. Ad. sk. Labuan.  $p^3$ . Ad. sk. (var.).  $q^3$ . Juv. sk.\*  $r^3$ . Q skeleton. Labuan. Sir Hugh Low [P.].

#### 14. Loriculus sclateri.

Loriculus sclateri, Wall. P. Z. S. 1862, p. 336, pl. xxxviii.; id. P. Z. S. 1864, pp. 281, 294; Schleg. Mus. P.-B. Psittaci, p. 132 (1864); id. Ned. Tijdschr. Dierk. iii. p. 186 (1865); G. R. Gr. Hand-list, ii. p. 152, n. 8177 (1870); Schleg. Ned. Tijdschr. Dierk. iv. p. 8 (1871); id. Mus. P.-B. Psittaci, Revue, p. 61 (1874); Gieb. Theo. Orn. ii. p. 499 (1875); Meyer, Rowl. Orn. Misc. ii. p. 233, n. 15 (1877); id. Ibis, 1879, p. 52; Sclat. List Vert. An. 8th ed. p. 326 (1883); Tristr. Cat. Coll. B. p. 76 (1889).

(1883); Tristr. Cat. Coll. B. p. 76 (1889). Coryllis sclateri, Finsch, Papag. ii. p. 697 (1868); Rehnw. Journ. f. Orn. 1881, p. 230 (Consp. Psitt. p. 118); id. Vogelbild. Nachtr. 51

(1883).

<sup>\*</sup> Specimen mentioned in Gray's List Psitt. p. 54 as L. pusillus (Java?).

Adult male. Green, the quills and the tail darker; forehead with a tinge of reddish brown at the base of the feathers; a large patch on the back, extending in a triangle between the shoulders, golden orange-yellow, deepening in the middle to rich orange-red; rump and upper tail-eoverts bright red; a stripe on the throat and the metacarpal edge red; outer web of the quills green, inner web black; inner web of the quills underneath and tail beneath blue; tip of the tail-feathers paler green: "bill black; cere and base of the upper mandible yellow; feet yellow; iris yellow" (Wallace). Total length 5.8 inches, wing 3.6, tail 1.7, bill 0.52, tarsus 0.45.

Female. Like the male.

Young. Green colour duller; the patch on the back is golden yellow, with no orange-red in the middle; the rump and the uropygium of a duller red; the stripe on the throat dull orange-red; the earpal edge yellow, stained with orange.

Hab. Sula Islands.

girdle.

a-g. Ad. et juv. Sula Islands. A. R. Wallace [C.]. (Types of species.) h, i. Ad. sk. Sula Islands (A. R. Wallace). Gould Coll. k, l. Ad. sk. Sula Islands (A. R. Wallace). Tweeddale Coll. m.  $\mathcal{Q}$  sternum with scapular

### 15. Loriculus quadricolor. (Plate XV.)

Loriculus quadricolor, Wald. Ann. & Mag. N. H. (4) ix. p. 398 (1872); id. Tr. Zool. Soc. viii. p. 109 (note) (1872); Meyer, Journ. f. Orn. 1873, p. 404; id. in Rowl. Orn. Misc. ii. p. 233, n. 14 (1877); Rosenb. Malay. Archip. p. 274 (1878); Meyer, Ihis, 1879, pp. 52, 145, 146, 147; Tweedd. Orn. Works, pp. 125, 207 (note) (1881); Wardl. Rams. Tweedd. Orn. Works, p. 667 (1881). Lorius (!) quadricolor, Gieb. Thes. Orn. iii. p. 814 (1877). Coryllis quadricolor, Rchnw. Journ. f. Orn. 1881, p. 231 (Consp. Psitt. p. 119); id. Vogelbild. Nachtr. 55 (1883).

Adult male (type). Like the male of L. sclateri, from which it differs in having the crown bright red, the interscapular region golden orange, without the orange-red tinge in the middle, and the rump and upper tail-coverts of a darker red: "eyes yellowish white; feet yellowish red; bill and claws black; cere and skin round the eyes reddish yellow" (Meyer). Total length 5.8 inches, wing 3.69, tail 1.7, bill 0.45, tarsus 0.37.

Female. Differs from the male, wanting the red crown; the head is green; on the forehead the bases of the feathers are red.

Young. Like the female, but has the metacarpal edge greenish yellow.

Hab. Togian Islands, in the Gulf of Tomini (Celebes).

This species is smaller than *L. sclateri*, and has the bill entirely black, whereas in *L. sclateri* the base of the bill is yellow.

Of the three specimens examined the male is not fully adult, having a few green feathers interspersed among the red ones of the pileum; the one marked female has no red on the pileum, and the carpal edge green-yellow, so that I think it is a young bird: the third specimen has the metacarpal edge yellowish green mixed with red, and I think it is not fully adult; it is marked young male, but I should say that it is a female nearly adult, as it wants the red feathers of the male on the pileum, and on the forehead only the bases of the feathers are red.

a. d, nearly fully	Togian Islands (Dr. A. B.	Tweeddale Coll.
adult sk. b. ♀, perhaps imm.	Meyer). Togian Islands (Dr. A. B.	Tweeddale Coll.
sk.	Meyer).	
c. d, or perhaps	Togian Islands (Dr. A. B.	Tweeddale Coll.
nearly adult ♀.	Meyer).	(Types of species.)

### 16. Loriculus stigmatus.

Psittacus (Psittacula) stigmatus, S. Müll. & Schleg. Verh. Land-en Volkenk. p. 182 (1841, fide Lord Walden).

Psittacula strigmata, G. R. Gr. Gen. B. ii. p. 423, n. 25 (1846). Loriculus stigmatus, Gr. R. Gr. Gen. B. 11. p. 423, n. 25 (1846).

Loriculus stigmatus, Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 244;

Soauncé, Rev. et Mag. de Zool., 1856, p. 222; Bp. Naumannia,

1856, Consp. Psitt. n. 252; G. R. Gr. List Psitt. Brit. Mus.

p. 54 (1859); Sclat. P. Z. S. 1860, pp. 225, 226; Wall. P. Z. S.

1864, pp. 287, 294; Schleg. Dierent. p. 70, with fig. (1864); id.

Mus. P.-B. Psittaci, p. 131 (1864); G. R. Gr. Hand-list, ii.

p. 152, n. 8170 (1870); Wald. P. Z. S. 1871, p. 333; Schleg.

Ned. Tijdschr. Dierk. iv. p. 8 (1871); Wald. Tr. Zool. Soc. viii.

p. 32 (1872); Schleg. Mus. P.-B. Psittaci, Reput. p. 60 (1874). p. 32 (1872); Schleg. Mus. P.-B. Psittaci, Revue, p. 60 (1874); Salvad, Ann. Mus. Civ. Gen. vii. p. 645 (1875); Gieb. Thes. Orn. ii. p. 499 (1875); Brügg. Abh. nat. Ver. Brem. v. p. 40 (1876); Meyer, Rowl. Orn. Misc. ii. p. 233, n. 12 (1877); Rowl. § Meyer, Orn. Misc. ii. p. 250, pl. 60 (1877); Lenz, Jown. f. Orn. 1877, p. 363; Meyer, Ibis, 1879, p. 51; Rosenb. Malay. Archip. p. 274 (1878); Blas. Journ. f. Orn. 1883, p. 134; Guillem. P. Z. S. 1885, p. 543; Blas. Zeitschr. f. ges. Orn. ii. p. 218 (1885); Tristr.

Cat. Coll. B. p. 76 (1889). Nanodes stigmatus, Rosenb. Journ. f. Orn. 1862, p. 60; id. Nat.

Tijdschr. Ned. Ind. xxv. p. 139 (1863).

Coryllis stigmata, Finsch, Papag. ii. p. 694 (1868); Rehnw. Vogelbild. t. xv. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 231 (Consp. Psitt. p. 119); Pelz. u. Lor. Ann. Naturh. Hofmus. iii. p. 39 (1888).

Adult male. Green, paler beneath, the nape and the interscapular region with a shade of orange; sinciput blood-red; rump and upper tail-coverts also red but much darker; a red spot on the chin and threat; metacarpal edge red; quills on the inner webs and tail beneath verditer-blue; tips of the tail-feathers pale green: iris pale yellow; bill black; eere and feet orange. Total length about 6 inches, wing 3.8, tail 1.7, bill 0.49, tarsus 0.46.

Adult female. Like the adult male, but wants the red patch on

the sinciput.

Young. Like the female, having the head entirely green; the

spot on the throat is yellow stained with red; carpal edge greenish yellow: "bill yellow" (Meyer), in dry skins dusky yellowish.

Hab. Celebes.

a, b. ♂♀ ad. st. c, d. Ad. sk. e, f, g. ♂ ad. et ad. sk.	Celebes. Makassar (A. R. Wallace). Makassar.	Massena Coll. Gould Coll. Wallace Coll.
h. Q ad. sk. i, k, l. Ad. et imm. sk.	Tondano, N. Celebes. Menado.	Wallace Coll. Tweeddale Coll.
m, n. Ad. sk. o. Imm. sk. p. Q ad. sk. q. Juv. sk. r. Juv. sk.	N. Celebes. Celebes. Celebes. Celebes. Celebes.	Tweeddale Coll. Tweeddale Coll. Salvin-Godman Coll. Gould Coll. Massena Coll.

### 17. Loriculus amabilis. (Plate XIV.)

Loriculus amabilis, Wall. Ibis, 1862, p. 349; id. P. Z. S. 1864, pp. 287, 294; Schley. Mus. P.-B. Psittaci, p. 131 (1864); Finsch, New-Guin. p. 157 (1865); G. R. Gr. Hand-list, ii. p. 152, n. 8180 (1870); Schley. Ned. Tijdschr. Dierk. iv. p. 7 (1871); id. Mus. P.-B. Psittaci, Revue, p. 61 (1874); Gieb. Thes. Orn. ii. p. 497 (1875); Salvad. Ann. Mus. Civ. Gen. vii. p. 755 (1875); Meyer, Rowl. Orn. Misc. ii. p. 233, n. 17 (1877); Salvad. Ann. Mus. Civ. Gen. x. p. 29, n. 34 (1877); id. Orn. Pap. e Mol. i. p. 169 (1880); id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 162 (1889). Coryllis amabilis, Finsch, Papag. ii. p. 696 (1868); Rchnw. Journ. f. Orn. 1881, p. 231 (Consp. Psitt. p. 119); id. Vogelbild. Nachtr. 55 (1883).

Adult male (type). Very much like the male of L. stigmatus, but much smaller, of a darker green colour, and with the rump and upper tail-coverts of a much brighter red: "bill black; feet light red" (Wallace). Total length 4.5 inches, wing 2.8, tail 1.35, bill 0.38, tarsus 0.32.

Adult female. Wants the red on the crown, but the bases of the feathers of the forehead are stained with red.

Young. The spot on the throat and the metacarpal edge are yellowish.

Hab. Halmahera and Batchian.

a, b. ♂♀ ad. sk.	Gilolo, Halmahera.	A. R. Wallace [C.].
c. Ad. sk.	Gilolo.	A. R. Wallace [C.]. (Types of species *.) A. R. Wallace [C.].

<sup>\*</sup> The female, the primaries of which are lost, was most likely a cage-bird, and I greatly doubt whether it really belongs to this species, as it has the under tail-coverts stained with red, approaching in that respect *L. cutamene*; it cannot be referred to the last-named species, as it has the carpal edge red, a feature which is wanting in *L. catamene*.

#### 18. Loriculus catamene.

Loriculus amabilis (part.), Wald. P. Z. S. 1871, p. 333 (Sanghir Isl.); id. Trans. Zool. Soc. viii. p. 26 (1872); Tweedd. Orn. Works,

p. 131 (1881).

Loriculus catamene, Schleg. Ned. Tijdschr. Dierk. iv. p. 7 (1871); id. Mus. P.-B. Psittaci, Revue, p. 62 (1874); Gieb. Thes. Orn. ii. p. 497 (1875); Meyer, Rowl. Orn. Misc. ii. p. 233, n. 11 (1877); Rowl. § Meyer, Rowl. Orn. Misc. ii. p. 236, pl. lvii. (young ♂, ♀) (1877); Rosenb. Zool. Gart. 1878, p. 347; Meyer, Sitzb. u. Abh. Ges. Isis, 1884, Abh. i. p. 6; id. Gefied. Welt, 1887, p. 264; Blas. Ornis, iv. p. 560 (1888).

Coryllis catamenia, Rchnw. Journ. f. Orn. 1881, p. 230 (Consp. Psitt. p. 118); id. Vogelbild. Nachtr. 52 (1883).

Psitt. p. 118); id. Vogetbid. Nachtr. 52 (1883). Coryllis catamene, Platen, Gefied. Welt, 1887, p. 263.

Adult male. Fine green, lighter and shading slightly into yellowish on the underparts; front part of the pileum to the middle of the vertex, lower back, rump, and upper tail-coverts bright red; a spot on the throat to the middle of the chin red; under tail-coverts orange-red, narrowly edged with green; both upper and under tail-coverts longer than the tail-feathers; meta-earpal edge yellowish green; quills on the inner web underneath verditer-blue; tail-feathers dark green, bluish underneath, tipped with yellow and edged at the tip very narrowly with red: "bill black; cere dusky yellowish; feet orange-yellow" (Platen). Total length about 5·3 inches, wing 3·3, tail 1·7, bill 0·45, tarsus 0·4.

Adult female. Head entirely green, with no red on the front part of the pileum; red colour on the under tail-coverts as in the male; upper and under tail-coverts, as in the male, longer than the tail-

feathers.

Young. Like the female; the red spot on the throat smaller; the under tail-coverts yellowish green, more or less edged with reddish; bill yellowish \*.

Hab. Great Sanghir.

#### 19. Loriculus aurantiifrons.

Loriculus aurantiifrons, Schleg. Ned. Tijdschr. Dierk. iv. p. 9 (1871) (type examined); id. Mus. P.-B. Psittaci, Revue, p. 62 (1874); Gieb. Thes. Orn. ii. p. 497 (1875); Salvad. Ann. Mus. Civ. Gen. vii. p. 911 (1875); Gould, B. of New Guin. pt. v. pl. 11 (1877); Meyer, Rowl. Orn. Misc. ii. pp. 231, 234, n. 18 (1877); Selat. P. Z. S. 1877, p. 107; id. Rowl. Orn. Misc. ii. p. 376, pl. 72. f. 1 (♀) (1877); Salvad. Ann. Mus. Civ. Gen. x. p. 29, n. 35 (1877); Rosenb. Malay. Archip. p. 593 (1878-79); Salvad. Orn. Pap. e Mol. i. p. 171 (1880); Sharpe, Journ. Linn. Soc., Zool. xvi. p. 426 (1882); Salvad. Orn. Pap. e Mol. iii. p. 516 (1883); id. Mem. R. Ac. Sc. Tor. (2) xl. p. 162 (1889); Tristr. Cat. Coll. B. p. 76 (1889).

<sup>\*</sup> I am indebted to Prof. W. Blasius for lending me his specimens of this rare species.

Corvllis aurantiifrons, Meyer, Sitzb. Isis Dresd. 1875, p. 77; Rehnw. Journ. f. Orn. 1881, p. 230 (Consp. Psitt. p. 118); id. Vogelbild. Nachtr. 53 (1883).

Adult male. Green, paler beneath; forehead golden yellow, abruptly defined behind; rump and upper tail-coverts red, on the upper part of the rump the red is mixed with yellow; sides of the rump yellow; a red spot on the throat; quills on the inner web and tail-feathers beneath verditer-blue; tail-feathers tipped with vellowish green: bill black; feet dusky. Total length about 4 inches, wing 2.52-2.7, tail 1.2, bill 0.34, tarsus 0.3.

Adult female. Wants the golden yellow on the forehead, which, like the cheeks, is tinged with bluish green; the bases of the bluish

feathers of the forehead are reddish.

Hab. Mysol and New Guinea.

The two specimens from S.E. New Guinea, mentioned below, one of which is marked female by the collector, Mr. H. O. Forbes, are larger (wing 2.8-2.9 inches) than the others, and want the reddish hase to the feathers of the forehead.

a. of ad. sk.	Arfak Mt., New Guinea.	Tweeddale Coll.
<ul> <li>b. ♂ ad. sk.</li> <li>c. ♀ ad. sk.</li> </ul>	Has, N.W. New Guinea. Milne Bay, S.E. New Guinea.	Gould Coll. C. Hunstein [C.].
d. ♀ ad. sk.	Sogeri District, S.E. New	H. O. Forbes [C.].

#### 20. Loriculus tener.

Loriculus tener, Sclat. P. Z. S. 1877, p. 107, sp. 36; id. Rowl. Orn. Misc. ii. p. 376, pl. 72. ff. 2, 3 (\$\times\$) (1877); Salvad. Orn. Pap. e Mol. i. p. 172 (1880); Finsch, Ibis, 1881, p. 537; Salvad. Mem. R. Ac. Sc. Tor. (2) xl. p. 162 (1889); Tristr. Cat. Coll. B. p. 76 (1889).

Coryllis tener, Rchnw. Journ. f. Orn. 1881, p. 229 (Consp. Psitt.

p. 117); id. Vogelbild. Nachtr. 50 (1883).

Adult female (type). Green, rump and upper tail-coverts yellowish green; an orange-red spot on the throat; quills on the inner web and tail beneath verditer-blue; tips of the lateral tail-feathers yellowish green: bill black; feet yellowish (?) dusky. Total length 4 inches, wing 2.7, tail 1.28, bill 0.34, tarsus 0.32.

Hab. Duke of York Island.

Obs. A second specimen, in Canon Tristram's Collection, shows a distinct yellowish tinge on the forehead at the base of the feathers.

 $a. \ \Omega$  ad. sk. Duke of York Island (Rev. G. Brown). Tweeddale Coll. (Type of species.)

# Subfamily VI. PLATYCERCINÆ.

Bill short and thick, deeper than long, the lower mandible generally hidden by the feathers of the cheeks; upper mandible swollen on the sides (except in the genus Porphyrocephalus, which has a more compressed and longer bill); culmen rounded; gonys turned up straight and rounded; upper mandible sometimes notched; hook of the upper mandible ridged on the under surface, producing a file-like appearance. Cere small, surrounding only the nostrils, and making between them a kind of saddle over the culmen. Tongue simple, except in Nanodes, which has a brush-tongue. Tail rather long, generally longer than the wing; tail-feathers gradually longer, but in the more typical forms the four middle feathers are of the same length. Wing acuminate, with some of the outermost primaries narrower towards the tips. Plumage much variegated. Furcula wanting, except in Nanodes.

Range. Australia, New Zealand, New Caledonia, and the Society

Islands.

 $\alpha$ 

### Key to the Genera.

Key to the Genera.		
v. Tail not banded across from the base to the tip.		
a'. Tail-feathers rather broad, never acuminate at the ends.		
a". Back not uniform, but with the fea-		
thers black, broadly bordered, and having a scale-like appearance; bill distinctly notched	45.	[p. 540. Platycercus.
b'' Back uniform.		
a'''. Bill longer than deep; upper mandible notched, with the hook much		[LUS, p. 556.
lengthened	46.	Ропрнукосерна-
dible not notched.		
a <sup>4</sup> . A yellow collar round the hind neck	47.	Barnardius, p. 558.
b <sup>4</sup> . No yellow collar round the hind neck.		
a <sup>5</sup> . Bill uniform, with base of upper mandible not lighter.		
a <sup>6</sup> . Two central tail-feathers		
longer than the following pair $b^{\mathfrak{s}}$ . Four central tail-feathers	48.	Рѕернотия, р. 561.
about the same length $b^5$ . Bill not uniform, but with	49.	Nеорнема, p. 569.
base of the upper mandible		
shining pearl-grey.  c <sup>6</sup> . Head not crested	50.	[p. 577. Cyanorhamphus,
$d^{\mathfrak{s}}$ . Head crested		
c". Upper mandible notched (orbital	<b>50</b>	N
ring complete!)  d". Upper mandible not notched	53.	MELOPSITTACUS,
		[p. 594.

b. Tail with cross bands from the base to the
c'. Tail long, longer than the wing; nails
long and straight
1. PLATYCERCUS.
Platycercus, Vig. Zool. Journ. i. p. 527 (1825) P. elegans.
Runge. Australia, Tasmania, and Norfolk Island.
Key to the Species *.
a. Cheeks blue.
a'. Underparts red. a''. Underparts crimson elegans, p. 541.
b". Underparts pale red, each feather slightly fringed with yellowish
b'. Underparts yellow; a red band on the fore-
head.
c". Underparts pale or straw-yellow; middle tail-feathers dull blue
feathers dark olive-green flaviventris, p. 545.
b. Cheeks white and blue; under tail-coverts red.
c'. Head pale yellow; underparts blue. e''. Edges of the feathers of the back bright
yellow; cheeks white, bordered with blue below, sometimes entirely white pallidiceps, p. 547.
f''. Edges of the feathers of the back straw-
yellow; cheeks almost entirely blue, only on the upper part white amathusia, p. 548.
d'. Head black; cheeks white, bordered with
blue below
c. Cheeks white; head red. f'. Upper tail-coverts green.
g". Edges of the feathers of the back yel-
lowish green
boge-yellow
of the back red; underparts entirely red;
bases of the quills white ignitus, p. 553. d. Cheeks yellow; head and underparts red.
h'. Smaller: total length 10.5 inches; rump
and upper tail-coverts green; central tail-feathers green icterotis, p. 554.
, r, v, r, v, r, v, r, v, r, v, r, v, r, v, r, v, r, v, r, v, r, v, r, v, r, v, r, v, r, v, r, v, r, v, r, r, v, r, r, r, r, r, r, r, r, r, r, r, r, r,

<sup>\*</sup> I do not know to which species the following reference is to be attributed, as it is not accompanied by any description:—

Platycercus paradiseus, Russ, Journ. f. Orn. 1871, p. 236.

i'. Larger: total length 12.5 inches; rump and upper tail-coverts olive-grey; central tailfeathers dull blue ..... xanthogenys \*, p. 555.

### 1. Platycercus elegans.

Beautiful Lory, Lath. Syn. i. p. 217, n. 20, with var. A, p. 218 (1781).

Pennantian Parrot, Lath. Syn. Suppl. p. 61, with var. (1787); Phill. Bot. Bay, p. 154, pl. 20 (1789); White, Journ. p. 174, pls. 13, 14 (1790); Lath. Syn. Suppl. ii. p. 83, with var. A (1802); id. Gen. Hist. ii. pp. 131, 132, var. A, B (1822).

Cont. Hist. II. pp. 181, 182, val. A., B (1828).
Psittacus elegans, Gm. S. N. i. p. 318, n. 59, with var. β (1788) (ex Latham); Lath. Ind. Orn. i. p. 89, n. 23, with var. β (1790); Vieill. N. D. xxv. p. 338 (1817); Kuhl, Consp. Psitt. p. 55 (1820); Vieill. Enc. Méth. iii. p. 1381 (1823).

Psittacus pennantii, Lath. Ind. Orn. i. p. 90, n. 26, with var. B (1790); Shaw, Gen. Zool. viii. 2, p. 410, pl. 56 (1811); Bechst. Kurze Uebers. p. 70 (1811); Vieill. N. D. xxv. p. 339 (1817); id. Rule Gebers, p. 10 (1311), r. att. D. A.V. p. 353 (1311), th. Enc. Méth. iii. p. 1381 (1823); id. Gal. des Ois. iii. pp. 1, 2, with pl. — (1823); Voigt, Cuv. Uebers. p. 730 (1831); Hahn, Orn. Atl., Papag. p. 39, t. 23 (mas) (1834); Dubois, Orn. Gal. pl. 52, var. A (3) (1839); Downing, Proc. Roy. Soc. Tasm. iii. p. 208 (1859) (Norfolk Isl.).

\* I am not acquainted with the following, which has been described by Mr. Ramsay without pointing out the species to which it is allied; it is described as having blue cheeks :-

#### PLATYCERCUS MASTERSIANUS, Ramsay.

Platycercus mastersianus, Rams. Pr. Linn. Soc. N. S. W. ii. p. 27 (1877), p. 194, n. 483 (1878); Rehnw. Journ. f. Orn. 1881, p. 118 (Consp. Psitt. p. 54); Ramsay, Tab. List, p. 16, n. 498 (1888); id. Cat. Austr. Birds, Psittaci, p. 63 (1891).

Adult. "Total length about 11 inches, wing 5.8, tail 6.3, tarsus 0.8, bill 0.7. The front, top of the head, nape, and ear-coverts crimson, mottled with yellow on the sides of the head, ear-coverts, and nape; feathers of the hind neck and back yellowish at the tips, blackish on concealed portions, these on the neck washed with red and tinged on the sides with bluish green; rump and upper tail-coverts crimson, the outer series of the latter greenish; scapulars black, broadly margined with yellowish, mingled with red and blue; shoulders deep blue, smaller coverts deep blue, centred with black, or black margined with blue, median coverts light blue; outer webs of primaries and secondaries blue, the inner webs and the tips of the primaries black; underside of the wing black, traversed about the middle of the quills with an indistinct broken white band (in a young specimen this white band is complete); under wing-coverts blue; cheeks blue, palest near the mandible; under tail-coverts crimson; chest bluish green, margined with yellow, many of the feathers centred with a large crimson spot; abdomen and flanks bluish green, the tips of the lower flank-feathers crimson; tail black below, the apical half of all, except the two centre feathers, blue and tipped with white, more largely on the inner than on the outer feathers; centre tail-feathers above greenish on the inner webs, blue on the outer; the rest blackish at the base, blue on the onter webs, the anterior third of each feather light blue and tipped with white, the spot increasing in size as the feather is more internal. Bill bluish at the base, whitish at the tip (probably faded); feet dark brown; iris, in a young living example, dark hazel."

Hab. "Interior of New South Wales."

Psittacus gloriosus, Shaw, Nat. Misc. ii. pl. 53 (1791).

Psittacus splendidus, Shaw, Lever. Mus. p. 27, pl. 29 (1792).

Perruche à large queue, Levaill. Hist. Nat. Perr. pls. 78 (ad.), 79

(young) (1805).

Platycercus pennantii, Vig. Zool. Journ. i. pp. 527, 528 (1825); Vig. & Horsf. Trans. Linn. Soc. xv. p. 280 (1826); Steph. Gen. Zool. xiv. 2, p. 120 (1826); Vig. Zool. Journ. iii. p. 244 (1827); Less. Man. d'Orn. ii. p. 146 (1828); id. Tr. d'Orn. p. 208 (1831); Less. (1988); id. Tr. d'Orn. p. 208 (1831); Id. d'Orn. p. 208 (1831); Id. d'Orn. p. 208 (1831); Id. d'Orn. p. 20 Compl. de Buff. ix. p. 220 (1837); op. cit. 2nd ed. p. 611 (1838); Fraser, P. Z. S. 1839, p. 113; Selby, Nat. Libr., Parrots, p. 173, pl. 25 (1836); Hartl. Syst. Verz. Gesell. Mus. p. 84 (1844); G. R. [h. 25] (1830); Haltit. Syst. Vers. Gest. Hals. p. 64 (1849); G. H. Gr. Gen. B. ii. p. 408, n. 1 (1846); Gould, B. Austr. v. pl. 23 (pt. xxvi., 1847); Rchnb. Newentd. Vög. N. Holl. n. 450 (1850); Blyth, Cat. B. Mus. A. S. B. p. 7 (1849); Bp. Consp. i. p. 2 (1850); id. Rev. et Mag. de Zool. 1856, p. 211; Bp. Naumannia, 1856, Consp. iv. p. 173; G. B. Gr. List Poitt. Exit. Mus. p. 3 (1850); Solat. Psitt. n. 173; G. R. Gr. List Psitt. Brit. Mus. p. 3 (1859); Sclat. P. Z. S. 1861, pp. 234, 367; G. R. Gr. Ibis, 1862, p. 227 (Norfolk Isl.); Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xi (1863); Schleg. Mus. P.-B. Psittaci, p. 96 (1864); Gould, Handb. B. Austr. ii. p. 44 (1865); Nitzsch, Pterylogr. (Engl. ed.) p. 101 (1867); Finsch, Papag. ii. p. 180 (1868); Müll. P. Z. S. 1869, p. 279; Finsch, Papag. ii. p. 1870 (2868); Müll. P. Z. S. 1869, p. 279; Russ, Journ. f. Orn. 1870, p. 30; G. R. Gr. Hand-list, ii. p. 137, Russ, Journ. f. Orn. 1870, p. 30; G. R. Gr. Hand-list, ii. p. 137, n. 7983 (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 40 (1874); Gulliv. P. Z. S. 1875, p. 489; Gieb. Thes. Orn. iii. p. 219 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 474 (1878); Rchnev. Vogelbild. t. vi. f. 1 (1878–83); Forbes, P. Z. S. 1879, pp. 169, 170, 174, pl. xvi. ff. 3, 4; Schmidt, P. Z. S. 1880, p. 310; Layard, Ibis, 1881, p. 173; Salv. Cat. B. Strickl. Coll. p. 461 (1882); Sclat. List Vert. An. 8th ed. p. 330 (1883); Ramsay, Tab. List, p. 16, n. 490 (1888); North, Pr. Linn. Soc. N. S. W. (2) iii. p. 1777 (1888); Cov & Ham. Pr. Linn. Soc. N. S. W. (2) iiv. p. 417 (1889); De Vis, Rep. Sc. Exp. N. Queensl. p. 33 (1889); Tristr. Cat. Coll. B. p. 77 (1889); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 257 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 50 (1891). Birds, Psittaci, p. 50 (1891).

Platycercus elegans, Licht. Nomencl. Av. p. 72 (1854); Rehnw. Journ. f. Orn. 1881, p. 123 (Consp. Psitt. p. 59); id. Voyelbild. Bericht. t. vi. f. 1 (1883).

Platycercus pennanti, var. nobbsi, Layard, MS. (Norfolk Island): Tristr. Ibis, 1885, p. 49; Ramsay, Tab. List, p. 37 (1888).

Platycercus nobbsi, Tristr. Cat. Coll. B. p. 77 (1889).

Adult, Crimson-red; feathers of the back and scapulars black. broadly edged with crimson-red; cheeks violet-blue; a broad black patch on the wing-coverts, bounded, near the bend of the wing and below, with violet-blue; secondaries deep blue on the outer web, and edged with violet-blue, the innermost secondaries edged with red: primaries black, with the basal half of the outer web and their coverts deep blue; under wing-coverts blue; quills underneath black; four middle tail-feathers deep blue, the others deep blue at the base, pale blue at the apical half: "irides very dark brown; bill horn-colour; feet blackish brown" (Gould). Total length 13.5 inches, wing 6.7, tail 6.7, bill 0.7, tarsus 0.68.

Young. Olive-green, cheeks and anterior wing-coverts blue; some

red patches, especially on the crown, on the throat, and on the under tail-coverts; central tail-coverts olive-purple.

Hab. Australia, from Rockingham Bay to Victoria, and also

Norfolk Island, where most likely it has been introduced.

The Norfolk Island bird has been recently separated as being smaller: besides two typical specimens of  $P.\ nobbsi$  from Norfolk Island (marked types on the labels) in Mr. Seebohm's Collection, I have examined many more in the British Museum, and I cannot find any difference between them and the Australian specimens; one of them is even larger than any from Australia: the typical specimens of  $P.\ nobbsi$  have been preserved in alcohol, so that they have shrunk a good deal \*.

	4	31 ' O TT 1
a. Ad. st.	Australia.	Major-Gen. Hard-
		wicke [P.].
b. Juv. st.	Australia.	J. P. Atkins, Esq. [P.].
c, d. Ad. sk.	Australia.	Rev. A. Strong [P.].
e. Imm. sk.	Australia.	Sir D. Cooper [P.].
f. Ad. sk.	Australia.	Tweeddale Coll.
g. Ad. sk.	Clarence River.	Tweeddale Coll.
h. Ad. sk.	New South Wales.	Gould Coll.
i, k, l. Ad. sk.	New South Wales (J. T. Cockerell).	Salvin-Godman Coll.
m, n. Ad. sk.	Melbourne.	Howard Saunders,
		Esq. [P.].
o-r. ♂ ? ad. et	Norfolk Island, June (F. M.	Voyage of H.M.S.
imm. sk.	Rayner).	'Herald.'
s. t. Ad. et imm.	Norfolk Island.	J. Brenchley, Esq.
sk.		[P.].

# 2. Platycercus adelaidæ.

Platycercus adelaidæ, Gould, P. Z. S. 1840, p. 161; id. B. Austr. v. pl. 22 (pt. iv., 1841); G. R. Gr. Gen. B. ii. p. 408, n. 2 (1846) Rehnb. Neuentd. Vög. N. Holl. p. 179 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 173; Bp. Naumannia, 1856, Consp. Psitt. n. 174; G. R. Gr. List Psitt. Brit. Mus. p. 3 (1859); Schat. P. Z. S. 1860, p. 371; Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xii (1863); Schleg. Mus. P.-B. Psittaci, p. 97 (1864); G. R. Gr. Hand-list, ii. p. 137, n. 7984 (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 40 (1874); Schat. List Vert. An. 8th ed. p. 330 (1883); Tristr. Cat. Coll. B. p. 77 (1889).

Platycercus adelaidiæ, Licht. Nomencl. Av. p. 72 (1854); Souancé, Rev. et Mag. de Zool. 1856, p. 211.

<sup>\*</sup> I am not acquainted with the following race:-

Platycercus pennantii, var. nigrescens, Ramsay, Tab. List, p. 34 (1888); id. Cat. Austr. Birds, Psittaci, p. 52 (1891).

<sup>&</sup>quot;This northern variety may be distinguished by its smaller size, thicker and more robust bill, and the deeper tint of crimson on its plumage; in some a few violet feathers appear on the chest; those on the head, hind neck, and back are almost all black, which colour extends also on to the cheeks in one specimen. Total length 12:3-11:5 inches, bill from forehead 0.8, tail 7, wing 6.3." (Ramsay.)

Hub. Bellenden-Ker Range, Queensland.

Platycercus adelaidensis, Gould, Handb. B. Austr. ii. p. 46 (1865); Finsch, Papag. ii. p. 183 (1868); Gieb. Thes. Orn. iii. p. 215 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 475 (1878); Rehuw. Vogelbild. t. vi. f. 4 (1878-83); id. Journ. f. Orn. 1881, p. 122 (Consp. Psitt. p. 58); Ramsay, Tab. List, p. 16, n. 491 (1888); id. Cat. Austr. Birds, Psittaci, p. 53 (1891).

Adult. Very much like P. elegans; the markings are disposed exactly in the same way; the only difference is in the red colour, which is much paler and mixed with yellowish; the feathers of the underparts have very narrow yellowish edges, the black feathers of the back have broad yellowish-red or yellowish-buff edges; the reddish feathers of the rump and upper tail-coverts are edged with yellowish; tail as in P. elegans: "irides brown; bill horn-colour; feet greyish brown" (Gould). Total length 14 inches, wing 7, tail 7.2, bill 0.75.

Young. Has the upper parts much more greenish; the black patch on the wing-coverts of the adult is replaced with olive-green; rump and upper tail-coverts olive-green, with patches of red; the underparts red, with olive-green patches, especially on the sides.

Hab. Interior and South Australia.

# 3. Platycercus flaveolus.

Platycercus flaveolus, Gould, P. Z. S. 1837, p. 26; id. Syn. B. Austr. pl. — f. 1 (head) (183—?); Wiegm. Archiv f. Naturg. 1839, p. 395; Gould, B. Austr. v. pl. 25 (pt. iv., 1841); G. R. Gr. Gen. B. ii. p. 408, n. 3 (1846); Rehnb. Neuentd. Vög. N. Holl. n. 178 (1850); Blyth, Cat. B. Mus. A. S. B. p. 8 (1849); Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 172; Souancé, Rev. et Mag. de Zool. 1856, p. 211; Bp. Naumannia, 1856, Consp. Psitt. n. 175; G. R. Gr. List Psitt. Brit. Mus. p. 4 (1859); Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xii (1863); Schleg. Mus. P.-B. Psittaci, p. 95 (1864); Gould, Handb. B. Austr. ii. p. 50 (1865); Sclat. P. Z. S. 1867, p. 687; Finsch, Papag. ii. p. 185 (1868); G. R. Gr. Hand-list, ii. p. 137, n. 7986 (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 39 (1874); Gieb. Thes. Orn. iii. p. 217 (1877); Diggl. Syn. B. Austr. ii. p. 78, pl. 78. f. 2 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 477 (1878); Rehnw. Vogelbild. t. vi. f. 3 (1878–83); id. Journ. f. Orn. 1881, p. 121 (Consp. Psitt. p. 57); Salvin, Cat. B. Strickl. Coll. p. 461 (1882); Sclat. List Vert. An. p. 331 (1883); Ramsay, Tab. List, p. 16, n. 493 (1888); Tristr. Cat. Coll. B. p. 77 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 56 (1891).

Adult. Head, rump, upper tail-coverts, and all the under surface pale yellowish; forehead red, lores and throat stained with red;

cheeks blue; feathers of the back and scapulars black, margined with pale yellowish; in some specimens between the black centre and the yellowish margin there is a bluish tinge; wings blue, with a black patch on the cubital wing-coverts; the inner wing-coverts and also the inner secondaries black, edged with pale yellowish and with a slight blue tinge; central tail-feathers blue, the next pair also blue on the outer webs and black on the inner, the remainder with the basal portion of their outer webs deep blue, passing into very pale blue towards their tips, the extreme tip being white; "bill light horn-colour; feet dark brown" (Gould). Total length 14 inches, wing 6·4, tail 7, bill 0·75, tarsus 0·75.

Female. Similar to the male, but slightly smaller (Ramsay).

Young. Much more greenish than the adult; frontal band red, but narrower; cheeks blue; upper parts olive, feathers of the back blackish in the centre; rump and upper tail-coverts yellowish olive; inner wing-coverts and inner secondaries also olive; a white band on the quills underneath; central tail-feathers olive.

Hab. Australia, from Victoria to New South Wales and the

Interior.

a, b. Ad. sk.
c, d. ♂ ad. sk.
e, f. Ad. sk.
g-k. Ad. et imm.
sk.
l. Imm. sk.
m. Skeleton.

S. Australia.
River Murray, Oct.
Australia.
Australia (J. T. Cockerell).
Australia.

Hon, E. India Co, [P.]. Sir G. Grey [P.]. Gould Coll. Salvin-Godman Coll.

Purchased.

# 4. Platycercus flaviventris \*.

La Perruche à large queue (1<sup>re</sup> Var.), Levaill. Perr. pl. 80 (1805).
Psittacus flavigaster, Temm. MS. (1819); id. Trans. Linn. Soc. xiii.
p. 116 (1821).

Psittacus flaviventris, *Temm. MS.* (1819); *id. l. c.* pp. 117, 118 (1821). Psittacus brownii, *Kuhl (nec Temm.)*, *Consp. Psitt.* p. 56 (1820); *Voigt, Cuv. Uebers.* p. 731 (1831).

Van Diemens Parrot, Lath. Gen. Hist. ii. p. 130, with var. A, p. 131

(young) (1822).

? Sulphur-headed Parrot, Lath. op. cit. p. 133 (1822).

Platycercus flavigaster, Vigors, Zool. Journ. i. p. 528 (1825); Less. Tr. d'Orn. p. 208 (1831); id. Compl. de Buff. ix. p. 220 (1837), 2nd ed. p. 611 (1838); Schleg. Mus. P.-B. Psittaci, p. 98 (1864); id. op. cit. Revue, p. 40 (1874).

? Psittacus bisetis, fœm., Shaw, Gen. Zool. viii. 2, p. 452 (1811).

<sup>\*</sup> The following quotations probably also refer to the present species:—
? New Caledonian Parrot, Lath. Gen. Syn. i. p. 248, n. 49 (1781); id. Gen. Hist. p. 173 (1822).

 <sup>?</sup> Psittacus caledonicus, Gm. S. N. i. p. 328, n. 82 (1788); Lath. Ind. Orn.
 i. p. 102, n. 57 (1790); Bechst. Kurze Ueb. p. 78 (1811); Vieill. N. D.
 xxv. p. 353 (1817); id. Enc. Méth. iii. p. 1391 (1823).

<sup>?</sup> Platycercus caledonicus, G. R. Gr. List Psitt. Brit. Mus. p. 4 (1859); id. P. Z. S. 1859, p. 164; id. Cat. B. Trop. Isl. p. 29 (1859); Verr. Rev. et May. de Zool. 1860, p. 387; Marie, Act. Soc. Linn. Bord. xxvii. p. 327 (1870); Ibis, 1877, p. 362; Layard, Ibis, 1878, p. 253; Oust. Bull. Soc. Philom. Paris, 1879, p. 218.

Platycercus flaviventris, Vig. & Horsf. Trans. Linn. Soc. xv. p. 281 (1826); Vig. Zool. Journ. iii. p. 244 (1827); Bourjot, Perr. pl. 29 (1837-38); Gould, Mitch. Austr. Exped. i. p. xviii (1838); id. Syn. B. Austr. pl.—, f. 2 (183-2); id. B. Austr. v. pl. 24 (pt. xx., 1845); Rchub. Neuentd. Vöy. N. Holl. n. 452 (1850); Blyth, Cat. B. Mus. A. S. B. p. 8 (1849); Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 181; id. Naumannia, 1856, Consp. Psitt. n. 183; G. R. Gr. List Psitt. Brit. Mus. p. 4 (1859); Finsch. Ned. Tijdschr. Dierk. i. Berigt. p. xii (1863); Gould, Handb. B. Austr. ii. p. 48 (1865); Finsch, Papag. ii. p. 204 (1868); G. R. Gr. Hand-list, ii. p. 137, n. 7985 (1870); Pelz. Ibis, 1873, p. 116; Gulliv. P. Z. S. 1875, p. 489; Gieb. Thes. Orn. iii. p. 216 (1877); Diggl. Syn. Austr. B. ii. p. 77, pl. 77, f. 1 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 476 (1878); Rchnw. Vogelbild. t. vi. f. 2 (1878-83); id. Journ. f. Orn. 1881, p. 122 (Consp. Psitt. p. 58); Salv. Cat. B. Strickl. Coll. p. 462 (1882); Sclat. List Vert. An. 8th ed. p. 332 (1883); Legge, Pr. Roy. Soc. Tasm. 1886, p. 238; Ramsay, Tab. List, p. 16, n. 492 (1888); Tristr. Cat. Coll. B. p. 77 (1889); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 258 (1889). Platycercus caledonicus, Wagl. Mon. Psitt. p. 532 (1832); Hartl. Syst. Verz. Ges. Mus. p. 84 (1844); G. R. Gr. Gen. B. ii. p. 408, n. 8 (1846); Souancé, Rev. et Mag. de Zool. 1856, p. 212; Bolle,

Adult. Head and underparts yellow; forehead and lores crimson; region round the eye stained with red; cheeks deep blue; nape green-yellow, each feather with dark edges; feathers of the back and scapulars dark olive-black, edged with green; rump-feathers and upper tail-coverts green, with a bluish tinge and edged with golden olive; wing-coverts like the feathers of the back, except the anterior ones which are light blue; primary-coverts deep blue, also the primaries towards the base of the outer webs deep blue: secondaries deep green-black, edged with yellow and green on the outer web; central tail-feathers dark green, next pair green, tinged with blue towards the tip of the outer webs, the remainder of the tail-feathers dark blue at the base, lighter towards the tip and tipped with white: bill light horn-colour: feet greyish brown. Total length 14.5 inches, wing 7 to 7.4, tail 7, bill 0.75.

Young. Upper parts olive-green, nearly uniform; forehead red, cheeks blue; underparts olive-yellow, yellower on the breast; wings as in the adult, but with less blue on the outer wing-coverts and more olive on the inner ones.

Hab. Tasmania and Victoria.

Journ. f. Orn. 1856, p. 170.

a. Ad. sk.

b. Juv. sk. Australia.

c. Ad. sk. d, e, f. Ad. et juv. sk. g. Ad. sk. h, i, k. Ad. sk. l, m. ♂ ad. et ♀ juv. sk. Australia. Australia (J. T. Cockerell). Queensland. Tasmania, July, Sept. Tasmania. Linnean Soc. [P.].
(Type of species.)
Hardwicke Bequest
[P.].
J. Gould, Esq. [P.].
Salvin-Godman Coll.

Tweeddale Coll.
J. B. Jukes, Esq. [P.].
Antarctic Expedition
[C.].

n, o, p. Ad. sk. & st. Tasmania. R. Gunn, Esq. [P.] Tasmania. C. G. H. Llovd, Esq. q-t. ♂ ad. & ♂♀ [P.]. imm. sk. u, v. ♂ ad. et ♀ imm. sk. Mount Wellington, Oct. Gould Coll. w. Ad. sk. Tasmania. Hume Coll. x. ♂ ad. sk. Lachlan Vale, Tasmania, Hume Coll. April. y. Q imm. sk. Ouse River, Tasmania, Hume Coll. April.

z, a'. Skeletons.

## 5. Platycercus pallidiceps.

? Blue-cheeked Parrot, Lath. Syn. Suppl. p. 64, n. 142 (1787); id.

Gen. Hist. ii. p. 252 (1822).

? Psittacus adscitus, Lath. Ind. Orn.i. p. 126, n. 127 (1790); Bechst. Kurze Uebers. p. 101 (1811); Vieill. N. D. xxv. p. 375 (1817); Kuhl, Consp. Psüt. p. 101 (1820); Vieill. Enc. Méth. iii. p. 1406

(1823); Wayl. Mon. Psitt. p. 746 (1832).

Platycercus palliceps, Vig. in Lear, Parr. pl. 19 (1832); Selby, Nat. Libr., Parrots, p. 176, pl. 26 (1836); Bourg. Perr. pl. 31 (1837–38); Gould, Syn. B. Austr. pl.—. f. 3 (head) (183–²); id. B. Austr. v. pl. 26 (pt. v., 1841); G. R. Gr. Gen. B. ii. p. 408, n. 5 (1846); Less. Descr. Mamm. et Ois. p. 185 (1847); Rchnb. Neuentd. Vög. N. Holl. n. 177 (1850); Bp. Rev. et Mug. de Zool. 1854, p. 153, n. 175; Souancé, Rev. et Mag. de Zool. 1856, p. 211 (var.): Bp. Naumannia, 1856, Consp. Psitt. n. 176; Gould, P. Z. S. 1857, p. 221; Zuchold, Journ. f. Orn. 1858, p. 234; G. R. Gr. List Psitt. Brit. Mus. p. 4 (1859): id. Cat. B. New Guin. p. 59 (1859); Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xii (1863); Schleg. Dierent. p. 74 (1864); id. Mus. P.-B. Psittaci, p. 95 (1864): Dierent. p. 74 (1864); id. Mus. P.-B. I'sittaci, p. 49 (1804); Gould, Handb. B. Austr. ii. p. 51 (1865); Ramsay, Ibis, 1865, p. 86; Finsch, Papag. ii. p. 195 (1868); G. R. Gr. Hand-list. ii. p. 137, n. 7988 (1870); Schleg. Mus. P.-B. Psittaci, Revue, p. 39 (1874); Diggl. Syn. B. Austr. ii. p. 78, pl. 78. f. 1 (1877); Gieb. Thes. Orn. iii. p. 219 (1877); Rchnw. Vogelbild. t. vi. f. 6 (1878–83); id. Journ. f. Orn. 1879, p. 212; Broadb. Pr. Roy. Soc. Queensl. ii. p. 124 (1885).

Conurus palliceps, Guér. Icon. Règn. An., Ois. p. 23, pl. 36 bis, f. 1

(1829-44).

Platycercus cœlestis, Less. Echo du Monde Sav. 1844, p. 111; G. R.

Gr. Gen. B. App. p. xix (1849).

Platycercus pallidus (errore?), Sclat. P. Z. S. 1862, p. 185.

Platycercus pallidiceps, Sclat. P. Z. S. 1872, p. 883; Gairrod, P. Z. S. 1873, pp. 466, 634, 1874, p. 587; Sclat. P. Z. S. 1878, p. 999; Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 478 (1878); Schmidt, Ramsay, Fr. Line, Soc. N. S. W. II. p. 1853, II. 478 (1818); Schmat, P. Z. S. 1880, p. 310; Rehnw. Journ. f. Orn. 1881, p. 119 (Consp. Psitt. p. 55); Sclat. List Vert. An. 8th ed. p. 331 (1883); Ramsay, Pr. Linn. Soc. N. S. W. vii. p. 53; id. Tab. List, p. 16, n. 494 (1888); Tristr. Cat. Coll. B. p. 77 (1889); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 258 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 58 (1891).

Adult. Head pale yellow, cheeks white, bordered below with blue; feathers of the nape, back, and scapulars black, broadly margined with gamboge-yellow; rump-feathers and upper tail-coverts very

pale greenish blue, with the bases black and fringed with black; under surface bluish, each feather fringed with black; under tailcoverts scarlet; wings blue, a black patch on the cubital wingcoverts: the inner secondaries and their coverts broadly edged with bluish green; quills underneath black; central tail-feathers deep blue, with a slight green tinge towards the base; the next pair blue on the outer web, black on the inner and tipped with light blue; the basal half of the remainder blackish brown on their inner webs, deep blue on the outer, and the terminal half delicate pale blue and tipped with white: "irides blackish brown; bill horncolour; feet dark mealy brown" (Gould). Total length 13 inches, wing 6.5 to 6.2, tail 6.4, bill 0.68, tarsus 0.7.

Female. Like the male in plumage.

Hab. Eastern Australia, from Port Denison to Victoria, and also the Interior.

There is a good deal of individual variation in this species: some specimens have the cheeks entirely white, with no blue border below; others have scattered red feathers, especially on the head, aud the upper breast tinged with yellow. I suspect that all this arises from hybridization or atavism, if we admit that this species was derived from one having a red head.

Sir T. Mitchell [P.]. Sir T. Mitchell [P.]. a, b. Ad. st. (var.). N.E. Australia. c. Ad. sk. (variety). Australia. d. Ad. sk. J. E. W. Rishton, Esq. Australia. [P.]. e. Ad. sk. Australia. Mrs. Bell [P.]. f, g. Ad. sk. h, i, k. Ad. sk. Gould Coll. Australia. Gould Coll. Australia. (variety). l. Ad. sk. (variety). Australia. Massena Coll. m. Ad. sk. Australia (J. T. Cock-Salvin-Godman Coll. erell). n, o. Ad. sk. (var.). Australia (J. T. Cock-Salvin-Godman Coll. erell). p. Ad. sk. Australia. Tweeddale Coll. q. Imm. sk. Australia. Purchased. r. Skull.

# 6. Platycercus amathusia.

Platycercus amathusia, Gould, MS.; Bp. Compt. Rend. xxx. p. 133 (1850); id. Rev. et Mag. de Zool. 1854, p. 153, n. 176; id. Naumannia, 1856, Consp. Psitt. n. 177; Finsch, Papag. ii. p. 197 (1868); G. R. Gr. Hand-list, ii. p. 137, n. 7987 (1870); Gieb. Thes. Orn. ii. p. 215 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 479 (1878); Rehnw. Journ. f. Orn. 1881, p. 119 (Consp. Psitt. p. 55); id. Vogelbild. Nachtr. 12 (1883); Ramsay, Tab. List, p. 16, n. 495 (1888).

Platycercus cyanogenys, Gould, P. Z. S. 1855, p. 166; id. B. Austr. Suppl. pl. 63 (pt. ii., 1855); G. R. Gr. List Psitt. Brit. Mus. p. 4 (1859); id. Cat. B. New Guin. p. 59 (1859); Gould, Handb. B. Austr. ii. p. 52 (1865); Ramsay, P. Z. S. 1875, p. 602.

Platycercus pallidiceps. var. amathusiæ, Ramsay, Cat. Austr. Birds, Psittaci, p. 59 (1891).

Adult. Very much like P. pallidiceps, but differs in the cheeks being almost entirely blue, in the paler yellowish edges of the feathers of the back, in the more yellowish tinge of the bluish feathers of the rump and upper tail-coverts, in the yellow tinge of the upper breast, in the greenish tinge of the blue colour of the lower breast and abdomen, and in the more greenish tinge of the base of the two central tail-feathers. Total length 12.5 inches, wing 6, tail 5.8, bill 7, tarsus 0.65.

Hab. Northern Australia, from Port Darwin to Rockingham Bay. Specimens from Gilbert River, collected by J. R. Elsey, are to a certain extent intermediate between P. pallidiceps and typical P. amathusia, having the blue cheeks like the latter, and the rump and upper tail-coverts pale bluish green, scarcely yellowish, like

the former.

a. Ad. sk.	Cape York (J. Macgillivray).	Voy. H.M.S. 'Rattle-
		snake.' (Type of
		P. cyanogenys, Gould.)
b, c. Ad. sk.	N. Australia (J. T. Cockerell).	Salvin-Godman Coll.
d, e. Ad. sk.	N.W. Australia.	J. R. Elsey, Esq. [P.]
f. of ad. sk.	Gilbert River, N.W. Australia,	
	Oct.	

### 7. Platycercus browni.

Psittaeus browni, Temm. (nec Kuhl) MS. (1819); id. Trans. Linn. Soc. xiii. p. 119 (1821) \*; Donovan, Nat. Reposit. ii. pl. 64 (1824). Psittaeus venustus, Brown (nec Temm.) apud Kuhl, Consp. Psitt. p. 52 (1820).

Brown's Parrot, Lath. Gen. Hist. ii. p. 139 (1822).

Platycercus browni, Vig. Zool. Journ. i. p. 528 (1825); Vig. & Horsf. Trans. Linn. Soc. xv. p. 282 (1826); Steph. Gen. Zool. xiv. 2, p. 120 (1826); Vig. Zool. Journ. iii. p. 245 (1827); Bourj. Perr. pl. 33 (ex Leur) (1837–38); Less. Compl. de Buff. ix. p. 223 (1837) id. op. cit. 2nd ed. p. 612 (1838); Gould, B. Austr. v. pl. 31 (pt. xvi. 1844); Rchnb. Neuentd. Vög. N. Holl. n. 183 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 153. n. 180; id. Naumannia, 1856, Consp. Psitt. n. 182; G. R. Gr. Cat. B. New Guin. p. 59 (1859); Gould, P. Z. S. 1863, p. 232; Finsch, Papag. ii. p. 198 (1868); G. R. Gr. Hand-list, ii. p. 137, n. 7989 (1870); Gieb. Thes. Orn. iii. p. 216 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 480 (1878); Rchnv. Vogelbild. t. xxiii. f. 5 (1878–83); id. Journ. f. Orn. 1881, p. 118 (Consp. Psitt. p. 54); Ramsay, Tab. List, p. 16, n. 496 (1888); id. Cat. Austr. Birds, Psittaci, p. 60 (1891).

Platycercus venustus, Wagl. Mon. Psitt. p. 529 (1832); Lear, Parr. pl. 20 (1832); G. R. Gr. Gen. B. ii. p. 408, n. 13 (1846); id. List

<sup>\*</sup> I have shown elsewhere that the first part of this volume was published in 1821, as appears from those copies in which the titlepages of the first and second parts have been preserved.

Psitt. Brit. Mus. p. 5 (1859); Schleg. Mus. P.-B. Psittaci, p. 96 (1864); Gould, Handb. B. Austr. ii. p. 53 (1865); Schleg. op. cit. Revue, p. 49 (1874); Masters, Pr. Linn. Soc. N. S. W. ii. p. 274 (1877).

Adult. Crown of the head, lores, and ear-coverts deep black; cheeks white, bounded below with blue; feathers of the back and scapulars black, with a broad margin of pale yellow; feathers of the rump, upper tail-coverts, and also the feathers of the breast and abdomen pale yellow, fringed with black and with the concealed bases blackish; under tail-coverts scarlet; a black patch on the wing-coverts; anterior wing-coverts from the bend of the wings downwards, outer webs of the secondaries, and base of the primaries rich blue; the last inner secondaries edged with pale yellow; inner webs of the quills black; under wing-coverts blue; central tailfeathers blue, slightly tinged with green at the base; the remaining tail-feathers deep blue at the base of the outer webs, brown at the base of the inner webs, and then pale blue, tipped with white, the shafts black: "irides blackish brown; bill light horn-colour, passing into blue at the base; legs and feet blackish brown" (Gould). Total length 11 inches, wing 6, tail 6, bill 0.65, tarsus 0.62.

Young. "Similar in colour to the adult bird, but all the markings dull and indistinct; as the individual approaches to maturity the breast becomes ornamented with a number of crescent-shaped markings of black and pale yellow, and as the bird advances in age the yellow increases in extent and the black nearly disappears"

(Gould).

Hab. Northern Australia, from Port Darwin to Port Essington. The type specimen shows numerous small red dots on the nape, a feature which is wanting in all the other specimens I have seen. Mr. Gould figures a specimen with a dark crimson head.

a. Ad. sk.		Linnean Soc. [P.].
		(Type of species.)
b, c. Ad. et imm.	Port Essington.	Capt. W. Chambers
st.	N. Australia (J. T. Cockerell).	[P.]. Salvin-Godman Coll.
d, $e$ . Ad. sk. $f$ , $g$ , $h$ . Ad. sk.	N.W. Australia.	J. R. Elsey, Esq. [P.].
i, Ad. sk.	[Point Pearce.]	Purchased.

# 8. Platycercus erythropeplus.

Platycercus erythropeplus, Salvad. P. Z. S. 1891, p. 130, pl. xii.

Adult male. Head, neck, and lower parts red; cheeks blue, whitish near the lower mandible; feathers of the upper parts of the back black, with dark red edges, as in P. elegans; scapulars black, edged with pale yellow and tipped with red; lower back and rump greenish yellow, each feather edged with red; the red feathers of the breast and abdomen have yellow bases; the middle of the abdomen and flanks yellow, with the edges of the feathers red; wings as in P. eximins; a black patch on the upper wing-coverts; edge of the

wing and outermost upper wing-coverts blue; the innermost median and greater upper wing-coverts black, with a green longitudinal band inside the yellowish edges; primaries and anterior secondaries black, edged with blue near the base; inner secondaries black, edged with yellow and green; two central tail-feathers green, passing into bluish at the tip; the remainder of the tail-feathers dark blue at the base, passing into light blue and tipped with white: bill white horn-colour; feet and naked skin round the eyes dusky flesh-colour; iris black. Size of P. elegans. (Gardens of the Zool. Soc. of London.)

Female. Similar to the male, only smaller and more yellow on the sides of the breast and on the flanks. (Gardens of the Zool. Soc. of London.)

Hab. Australia.

This species is intermediate between P. elegans and P. eximius. The red colour of the head and breast is, like that of P. eximius, a little brighter than in P. elegans. The feathers of the upper back have broad red edges like P. elegans, while the scapulars are edged with pale yellow as in P. eximius, but tipped with red. predominant red colour of the underparts connects the new species with P. elegans, but the yellow bases of the red feathers of the breast and abdomen show a certain affinity to P. eximius; the yellow colour on the middle of the abdomen and on the flanks, and the two central tail-feathers being green, passing into bluish at the tip, also betray affinity with P. eximius. The red edges of the vellowish feathers of the lower back and rump is a peculiar feature of this bird. The cheeks blue in the lower part and white near the lower mandible show more than anything else how truly intermediate this bird is between the blue-cheeked P. elegans and the white-cheeked P. eximius.

# 9. Platycercus eximius.

Psittacus eximius, Shaw, Nat. Misc. pl. 93 (1792); id. New Holl. Zool. pl. i. (1794); Lath. Ind. Orn. Suppl. p. xxi (1801); Shaw, Gen. Zool. viii. 2, p. 411, pls. 57, 58 (1811); Vieill. N. D. xxv. p. 354 (1817); Kuhl, Consp. Psitt. p. 54 (1820); Vieill. Enc. Méth. iii. p. 1391 (1823); id. Gal. des Ois. iii. pl. — (1823); Voigt, Cur. Uebers. p. 730 (1831); Thienem. Fortpfl. d. ges. Vög. p. 72 (1846). Perruche omnicolore, Levaill. Hist. Nat. Perr. pls. 28, 29 (1801).

Nonpareil Parrot, Lath. Syn. Suppl. ii. p. 85 (1802); id. Gen. Hist ii. p. 138 (1822).

Psittacus capitatus, Shaw, Gen. Zool. viii. 2, p. 466 (1811); Kuhl. Consp. Psitt. p. 100 (1820).

Psittacus omnicolor, Bechst. Lath. Uebers. p. 68, pl. 2 (1811).

Psittacus pennanti, fœm., Wolf, Abbild. merkw. naturh. Gegen. H. 4. t. 17; Hahn, Orn. Atl., Papag. t. 24 (1834); Dubois, Orn. Gal. pl. 52 B (1839).

Platycercus eximius, Vig. Zool. Journ. i. p. 528 (1825); Vig. & Horst. Trans. Linn. Soc. xv. p. 281 (1826); Steph. Gen. Zool. xiv. 2, p. 120 (1826); Vig. Zool. Journ. iii. p. 244 (1827); id. P. Z. S. 1831, p. 36; Less. Tr. d'Orn. p. 209 (1831); Wagl. Mon. Psitt. p. 531 (1832); Gould, Syn. B. Austr. pl. — f. 2 (183-?); Hartl.

Syst. Verz. Ges. Mus. p. 84 (1844); Gould, B. Austr. v. pl. 27 Sget. Ver. Ces. 1968. p. 64 (1844); Goldal, B. Alastr. V. pl. 24 (pt. xxii., 1846); G. R. Gr. Gen. B. ii. p. 408, n. 7 (1846); Relnb. Neuentd. Vög. N. Holl. n. 447 (1850); Blyth, Cat. B. Mus. A. S. B. p. 7 (1849); Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 178; Souancé, Rev. et Mag. de Zool. 1856, p. 212; Bp. Naumannia, 1856, Consp. Psitt. n. 179; Horsf. & Moore, Cat. B. Mus. E. I. Comp. ii. p. 624 (1858); G. R. Gr. List Psitt. Brit. Mus. p. 5 (1850); Hometer, Levis G. R. Gr. 1870, 200 Comp. II. p. 024 (1850); G. R. Gr. List Psitt. Brit. Mus. p. 5 (1859); Homeyer, Journ. f. Orn. 1859, p. 360; Selat. P. Z. S. 1862, p. 22; Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xii (1863); Schleg. Mus. P.-B. Psittaci, p. 96 (1864); Gould, Handb. B. Austr. ii. p. 55 (1865); Müll. P. Z. S. 1863, p. 279; Finsch, Papag. ii. p. 190 (1868); Russ, Journ. f. Orn. 1869, p. 415, 1870, p. 30; G. R. Gr. Hand-list, ii. p. 137, n. 7990 (1870); Garrod, P. Z. S. 1873, pp. 466, 634, 1874, p. 587. Selley. Mar. D. P. D. 1874. G. R. Gr. Hand-list, n. p. 137, n. 7990 (1870); Garrod, P. Z. S. 1873, pp. 466, 634, 1874, p. 587; Schley, Mus. P.-B. Psittaci, Revue, p. 39 (1874); Gulliv. P. Z. S. 1875, p. 489; Gieb. Thes. Orn. iii. p. 217 (partim) (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 481 (1878); Forbes, P. Z. S. 1879, p. 169; Schmidt, P. Z. S. 1880, p. 310; Rehnw. Vogelbild. t. vi. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 120 (Consp. Psitt. p. 56); Salvin, Cat. B. Strickl. Coll. p. 461 (1822); Sclat. List Vert. An. 8th ed. p. 331 (1883); Legge, Pr. Roy. Soc. Tasm. 1886, p. 238; Ramsay, Tab. List. p. 16, 407 (1888); North Pr. Linn. Soc. N. S. W. (2) Tab. List, p. 16, n. 497 (1888); North, Pr. Linu. Soc. N. S. W. (2) iii. p. 1777 (1888); Tristr. Cat. Coll. B. p. 77 (1889); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 258 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 61 (part.) (1891).
Platycercus omnicolor, Less. Compl. de Buff. ix. p. 220 (1837); op. cit.

2nd ed. p. 611 (1838).

Adult. Head, sides of neck, breast, and under tail-coverts scarlet; cheeks white; nape yellow; feathers of the back black, edged all round with greenish yellow; rump, upper tail-coverts, and lower parts of the belly yellowish green; lower breast yellow, with a scarlet band along the middle; a patch on the wing-coverts black; anterior wing-coverts, from the bend of the wing downwards, and under wing-coverts violet-blue; the inner median and greater upper wing-coverts dark green or blackish, edged with greenish yellow; primaries brown; the base of the outer webs of the primaries, their coverts, and the anterior secondaries deep blue; the inner secondaries greenish black, edged on the outer web with yellow-green; two central tail-feathers green, passing into bluish at the tip; the remainder of the tail-feathers green at the base, then dark blue passing into light blue, and tipped with white: "bill horn-colour; feet brown; irides brown" (Gould). Total length 13.5 inches, wing 6.5 to 6.1, tail 6.5, bill 0.7.

Young. Less brightly coloured, with the yellow colour more

greenish, and with the nape greenish instead of yellow.

Hab. S.E. Australia, from Wide Bay district to Victoria, and also Tasmania.

u. Ad. st. Australia. b, c. Ad. sk. Australia (J. T. Cockerell). d, e. Imm. sk. Australia. f. Ad. sk. Australia.

Purchased. Salvin-Godman Coll. Sir D. Cooper [P.]. J. E. W. Rishton, Esq. [P.].

Hume Coll. g, h. Imm. sk. Australia. Hume Coll. i. Juv. sk. Eastern Creek, Dec. C. G. H. Lloyd, Esq. h-n, Ad. sk. Tasmania. [P.]. Antarctic Exp. [C.]. Van Diemen's Land. o, p. 3 ad. sk. q, r. Q ad. et 3 Ouse River, Tasmania, April. Hume Coll. imm. sk. s. Ad. sk. t. Ad. sk. (var.).

u, v. Ad. st. (albinos). w. Skeleton.

S. Australia.

J. Fischer, Esq. [P.].

Hybrid P. eximius  $\mathcal{S} \times Psepho-Zool$ . Soc. Gardens. .v. 9 ad. sk. tus hæmatonotus Q.

## 10. Platycercus splendidus.

Platycercus splendidus, Gould, P. Z. S. 1845, p. 105 (nec Psittacus splendidus, Shaw); id. B. Austr. v. pl. 28 (pt. xxvii., 1847); G. R. Gr. Gen. B. App. p. 19 (1849); Rohnb. Neuentd. Vög. N. Holl. n. 441 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 177; id. Naumannia, 1856, Consp. Psitt. n. 178; Zuchold, Journ. f. Orn. 1858, p. 39; G. R. Gr. List Psitt. Brit. Mus. p. 5 (1859); Gould, Handb. B. Austr. ii. p. 56 (1865); G. R. Gr. Hand-list, ii. p. 137, n. 7993 (1870); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 482 (var.) (1878); Rehnw. Vogelbild, in the text of pl. vi. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 121 (Consp. Psitt. p. 57) (subsp.); Ramsay, Tab. List, p. 16, n. 497 A (var.) (1888).

Platycercus eximius, var., Finsch, Papag. ii. p. 191 (1868); Gieb. Thes. Orn. iii. p. 217 (partim) (1872).

Platycercus eximius, part., Ramsay, Cat. Austr. Birds, Psittaci, p. 61 (1891).

Adult. Very much like P. eximins, but has no yellow spot on the nape, the edges of the black feathers of the back are gambogeyellow, with no greenish tinge; the rump, the upper tail-coverts, and the lower abdomen pale verdigris: "irides dark brown; bill horn-colour; feet mealy brown" (Gould). Total length 12.5 inches, wing 6.1, tail 6.2, bill 0.7, tarsus 0.7.

Hab. Eastern Australia, from Wide Bay district to New South

Wales and the Interior.

Clarence River. a. Ad. sk. Tweeddale Coll. Queensland (J. T. Cockerell). Queensland (J. T. Cockerell). Salvin-Godman Coll. b. Ad. sk. c. Ad., var. Salvin-Godman Coll. d. Ad. Australia. Purchased.

# 11. Platycercus ignitus.

Platycercus ignitus, Leadb. P. Z. S. 1837, p. 8; Wiegm. Arch. f. Naturg. 1839, p. 395; Gould, Syn. B. Austr. pl. — f. 1 (head) (183-?); G. R. Gr. Gen. B. ii. p. 408, n. 4 (1846); Hartl. Erst. Nachtr. Verz. p. 15 (1846); Gould, B. Austr. v. pl. 30 (pt. xxix., 1847); Rehnb. Neuentd. Vög. N. Holl. n. 449 (1850); Bp. Rev. et

Mag. de Zool. 1854, p. 153, n. 174; id. Naumannia, 1856, Consp. Psitt. n. 180; G. R. Gr. List Psitt. Brit. Mus. p. 5 (1859): Finsch, Papag. ii. p. 189 (1868); G. R. Gr. Hand-list, ii. p. 137, n. 7991 (1870); Gieb. Thes. Orn. iii. p. 218 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 484 (N. S. Wales, Interior) (1878); Rehnw. Journ. f. Orn. 1881, p. 121 (Consp. Psitt. p. 57); Rumsay, Tab. List, p. 16, n. 499 (1888).
Platycercus eximius, part., Gould, Handb. B. Austr. ii. p. 55 (ab-

normal colouring) (1865); Ramsay, Cat. Austr. Birds, Psittaci,

p. 61 (1891).

Adult. Head, sides of the neck, and underparts red; cheeks white with a bluish tinge; feathers of the back and scapulars black, margined with red; between the black and the red, and also on the edge of the red, there is a narrow green-yellow line; rump and upper tail-coverts red; on the sides of the breast a few black spots, surrounded with yellowish; a great blackish patch on the upper wingcoverts; wing-coverts near the bend of the wing and under wingcoverts pale violet-blue; anterior greater upper wing-coverts also pale violet-blue, the inner ones blackish, edged with greenish; primarycoverts deep blue, with the base white; quills brown, with broad white base both to the outer and inner webs; primaries with some blue on the onter web, secondaries on the outer web tinged with greenish; the greater under wing-coverts black, with the bases white; central tail-feathers reddish; the other tail-feathers white at the base, then deep blue passing into light violet-blue, and tipped more or less with white: bill horn-colour; feet brown. length 11.2 inches, wing 5.4, tail 5.6, bill 0.65, tarsus 0.65.

Immature (type). A little larger, the red colour paler; the black feathers of the back edged with greenish yellow, stained with red. Total length 12.5 inches, wing 5.9, tail 6, bill 0.65, tarsus 0.68.

Hab. Australia, from New South Wales to the Interior (Ramsay).

a. Imm. sk.

Australia.

Evton Coll. (Type of species.) Argent Coll.

b. Ad. sk.

Australia.

# 12. Platycercus icterotis.

Psittacus icterotis, Temm. MS. (1819); Kuhl, Consp. Psitt. p. 54 (1820); Temm. Trans. Linn. Soc. xiii. p. 120 (1821). Yellow-cheeked Parrot, Lath. Gen. Hist. ii. p. 183 (1822).

Platycercus stanleyi, *Vig. Zool. Journ.* v. p. 273 (1830); *Jard. & Selby, Ill. Orn.* ii. pl. 108 (jun.) (1830?); *Lear, Parr.* pls. 23, 24 (1832).

Platycercus icterotis, Less. Tr. d'Orn. p. 209 (1831); Wagl. Mon. Reitt, p. 530 (1832); Less. 17. a Orn. p. 205 (1831); in agr. Mon. Psitt, p. 530 (1832); Less. Compl. de Buff. ix, p. 221 (1837); id. op. cit. 2nd ed. p. 611 (1838); Bourj. Perr. pl. 30 (jnv.) (1837–38); Gould, Syn. B. Austr. pl. —, f. 3 (head) (183–?); id. B. Austr. v. pl. 29 (pt. xviii., 1845); G. R. Gr. Gen. B. ii. p. 408, n. 6 (1846); Relnb. Newentd. Vöy, N. Holl. n. 446 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 179; Souancé, Rev. et Mag. de Zool. 1854, p. 153, p. 179; Souancé, Rev. et Mag. de Zool. 1856, p. 2012; Pr. Newenty 1856, Green, Poitt, p. 1811, C. P. Green, Poitt, p. p. 212; Bp. Naumannia, 1856, Consp. Psitt. n. 181; G. R. Gr. List Psitt. Brit. Mus. p. 6 (1859); Schleg. Mus. P.-B. Psittaci,

p. 97 (1864); Gould, Handb. B. Austr. ii. p. 58 (1865); Finsch, p. 91 (1804); Gould, Illando, B. Hastr, H. p. 86 (1805); Landon, Papag, ii. p. 186 (1868); G. R. Gr. Hand-list, ii. p. 137, n. 7992 (1870); Schleg, Mus. P.-B. Psittaci, Revue, p. 40 (1874); Gieb. Thes. Orn. iii. p. 217 (1877); Forbes, P. Z. S. 1877, pp. 307, 310, 312; Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 495 (1878); Rehnw. Vogelbild, t. vi. f. 6 (1878–83); id. Journ. f. Orn. 1881, p. 120 (Consp. Psitt. p. 56); Salvin, Cat. B. Strickl. (1889); Selat. List. Vent. Ap. 8th. ed. p. 331 (1883). p. 461 (1882); Sclat. List Vert. An. 8th ed. p. 331 (1883); Ramsay, Tab. List, p. 17, n. 500 (1884); Tristr. Cat. Coll. B. p. 77 (1889); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 259 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 65 (1891). Platycercus icterodes, Bourjot, fide Gould, Handb. B. Austr. ii.

p. 58.

Adult male. Head, sides of the neck, and all the under surface scarlet; cheeks yellow; feathers of the back black, bordered with green, more or less stained with red; rump and upper tail-coverts green; a black patch on the upper wing-coverts, the anterior wingcoverts from the bend of the wing down to the primary-coverts, and also the base of the outer web of the primaries, blue; inner greater wing-coverts and secondaries edged with green on the outer webs; under wing-coverts blue; sides of the body more or less tinged with yellowish; thighs dull green; central tail-feathers green, the next pair of tail-feathers also green, but tinged with blue towards the tip of the outer webs, and tipped with white, the remaining feathers light blue, tipped with white, and with the basal portion green: "irides blackish brown; bill light horn-colour; feet and legs dull ashy brown" (Gould). Total length 10.5 inches, wing 5.3, tail 5, bill 0.61, tarsus 0.6.

Female. Similar to the male, only slightly duller in colour

(Ramsay).

Young. "The young birds of both sexes are nearly of a uniform green, becoming parti-coloured as they advance in age; the scarlet of the crown and abdomen and the yellow of the cheeks gradually taking the place of the green colouring of youth" (Gould).

Hab. South-western Australia.

a. Ad. sk.	Australia?	Linnean Society [P.]. (Type of species.)
b. Ad. st.	Australia.	Purchased.
c. Imm. sk.	Australia.	J. E. W. Rishton [P.].
d. Imm. sk.	Australia.	Gould Coll.
e, f. Ad. sk.	W. Australia.	Purchased.

# 13. Platycercus xanthogenys. (Plate XVI.)

Platycercus xanthogenys, Salvad. P. Z. S. 1891, p. 129.

Adult (type). Head, sides of the neck, and all the under surface scarlet; the feathers of the breast and abdomen with narrow yellow pale edges; cheeks yellow; feathers of the nape and back black, bordered with red; feathers of the rump and upper tail-coverts also black, broadly margined with olive-grey, the longest upper tailcoverts stained with red at the tip; a black patch on the upper wing-coverts; the anterior ones from the bend of the wing down to the primary-coverts, and also the base of the outer webs of the primaries, blue; inner greater wing-coverts and inner secondaries with grey edges stained with yellowish or reddish; under wingcoverts blue; quills underneath black; sides of the body tinged with yellowish; thighs grey; central tail-feathers dull blue; the next pair of tail-feathers blue, brighter on the outer webs, and tipped with white; the remaining tail-feathers light blue, tipped with white and with the basal portion deep blue: bill horn-colour; feet brown. Total length 12.5 inches, wing 5.45, tail 6, bill 0.56, tarsus 0·63.

Hab. Unknown, but most probably Australia.

This species differs from P. icterotis, to which it is nearly allied, in being larger, and in having the cheeks of a paler yellow, the feathers of the back edged with red, the rump-feathers and upper tail-coverts edged with greyish olive, and the central tail-feathers blue with no green; there are also other minor differences.

a. Ad. sk.

Australia? = n n rushing Gould Collection. (Type of species.)

#### 46. PORPHYROCEPHALUS.

Type.

P. spurius. Purpureicephalus, Bp. Rev. et Mag. de Zool. 1854, p. 153. Porphyreicephalus, Rehnw. Vogelbild., Syst. Verz. p. 1 (1883).

Porphyrocephalus, Heine, Nomencl. Mus. Hein. Orn. p. 241 (1890).

Range. Western Australia.

# 1. Porphyrocephalus spurius.

Psittacus spurius, Kuhl, Consp. Psitt. p. 52 (young) (1820); Wugl. Mon. Psitt. p. 740 (1832); Pucher. Rev. et Mag. de Zool. 1853, p. 158.

Platycercus pileatus, Vig. Zool. Journ. v. p. 274 (1830); Wagl. Mon. Psitt. p. 528 (1832); Lear, Parr. pls. 21, 22 (1832); Jard. & Selby, Ill. of Orn. ii. pl. 102 (— ?); Hartl. Syst. Verz. Gesell. Mus. p. 84 (1844); Gould, B. Austr. v. pl. 32 (pt. xix., 1845); G. R. Gr. Gen. B. ii. p. 408, n. 12 (1846); Rehnb. Neuentd. Vög. N. Holl. n. 451 (1850); Zuchold, Journ. f. Orn. 1858, p. 39; Sclat. P. Z. S. 1859, p. 212; G. R. Gr. List Psitt. Brit. Mus. p. 8 (1859); Schleg. Mus. P.-B. Psittaci, p. 94 (1864); op. cit. Revue, p. 39 (1874); Sclat. List Vert. An. 8th ed. p. 331 (1883).

Psittacus (Platycercus) purpureocephalus, Quoy et Gaim. Voy. Astrol., Zool. i. p. 235, pl. 22 (1830).

Platycercus rufifrons, Less. Tr. d'Orn. p. 208 (young) (1831); G. R. Gr. Gen. B. ii. p. 408, n. 21 (1846); Pucher. Rev. et Mag. de Zool. 1853, p. 157; Hartl. Journ. f. Orn. 1855, p. 422.
Pezoporus rufifrons, Bourjot, Perr. pl. 9 (young) (1837–38).

Conurus purpureocephalus, Bourjot, Perr. pl. 39 (ad.) (1837-38).

Platycercus purpureocephalus, Less. Compl. de Buff. ix. p. 221 (1837), 2nd ed. p. 611 (1838); G. R. Gr. Gen. B. ii. p. 408, n. 20 (1846).

Purpureicephalus pileatus, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 167; Sovancé, Rev. et Mag. de Zool. 1856, p. 211; Bp. Naumannia, 1856, Consp. Psitt. n. 169; Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xi (1853); Gould, Handb. B. Austr. ii. p. 60 (1865); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 259 (1889).

North, Descr. Cat. Nests & Eggs Austr. Birds, p. 259 (1889).

Platycereus spurius, Finsch, Papag. ii. p. 201 (1868); Gieb. Thes. Orn. iii. p. 220 (1887); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 486 (1878); Rehnw. Vogelbild. t. xvi. f. 6 (1878–83); id. Journ. f. Orn. 1881, p. 125 (Consp. Psitt. p. 61); Ramsay, Tab. List, p. 17, n. 501 (1888); id. Cat. Austr. Birds, Psittaci, p. 67 (1891).

Purpureicephalus spurius, G. R. Gr. Hand-list, ii. p. 138, n. 8004

(1870).

Porphyrocephalus spurius, Hein. u. Rchnw. Nomencl. Mus. Hein. Orn. p. 241 (1890).

Adult male. Pileum deep maroon-red; lores dusky red; cheeks yellowish green, becoming more yellow on the sides of the neck; back and scapulars green; rump and upper tail-coverts greenish yellow, the longest upper tail-coverts green; breast and abdomen violet-blue; feathers of the vent greenish yellow, broadly tipped with red; thighs red, with the bases of the feathers whitish; under tail-coverts red; wing-coverts green; carpal edge, primary-coverts, primaries on the base of the outer webs, and under wing-coverts deep blue; central tail-feathers green, passing into deep blue towards their tips; lateral tail-feathers green at the base, crossed by a black band, and then passing into blue, which becomes paler and light towards the tips; the tips of the third and fourth pairs white: "irides dark brown; bill horn-colour; feet dull brown" (Gould). Total length 15 inches, wing 6·2 to 6·4, tail 7·5, bill 0·98 to 1, tarsus 0·76.

Female. Like the male, but duller and smaller (Gould).

Young. Upper parts green; a frontal band and some feathers of the crown dull red; rump as in the adult bird; breast and abdomen dull reddish grey, each feather edged with bluish; under tailcoverts red, more or less green; tail as in the adult bird, only duller, more greenish and less blue.

Hab. Western Australia, from King George's Sound to Port

Essington.

_		
a. Ad. sk.	Australia.	J.E.W. Rishton, Esq.
b. Ad. sk. c. Ad. sk. d. Ad. st. e, f. Ad. sk. g, h. Ad. et juv. st.	Australia. N.W. Australia ( <i>J. T. Cockerell</i> ). W. Australia. Swan River, W. Australia. Swan River, W. Australia.	[P.]. Tweeddale Coll. Salvin-Godman Coll. Zoological Soc. Coll. Purchased. Gould Coll.
i. Ad. sk. k. Juv. sk.		Gould Coll. Purchased.

#### 47. BARNARDIUS.

Type.

Barnardius, Bp. Rev. et Mag. de Zool. 1854, p. 153 . . . . B. barnardi.

Range. Extends from South Australia through the Interior to Western Australia.

### Key to the Species.

A yellow collar on the nape.

a. Head verditer-green, with a broad browngreen crescent from the occiput to the eyes; forehead red.....

barnardi, p. 558.

b. Head brown-black.

a'. Frontal band red; abdomen green; larger, wing 8 inches 

semitorquatus, p. 559.

b'. No frontal red band, or very seldom a slight indication of it; abdomen pale yellow-green; smaller, wing 6.9 .... zonarius, p. 560.

#### 1. Barnardius barnardi.

Barnard's Parrot, Lath. Gen. Hist. ii. p. 121, n. 23 (1822).

Psittacus barnardi, Lath. MSS.

Platycercus barnardi, Viy. & Horsf. Trans. Linn. Soc. xv. p. 283 (1826); Vig. Zool. Journ. iii. p. 245 (1827); Wagl. Mon. Psitt. p. 528 (1832); Lear, Parr. pl. 18 (1832); Bourj. Perr. pl. 32 (1837–38); Gould, Syn. B. Austr. pl. —. f. 1 (183–?); id. B. Austr. v. pl. 21 (pt. xi., 1843); G. R. Gr. Gen. B. ii. p. 408, n. 18 (1846); Mitch. P. Z. S. 1849, p. 64; Blyth, Cat. B. Mus. A. S. B. p. 8 (1849); Reliab. Neuentd. Vög. N. Holl. n. 182 (1850); G. R. Gr. List Psitt. Brit. Mus. p. 8 (1859); Homeyer, Journ. f. Orn. 1859, p. 360; Schleg. Mus. P.-B. Psittaci, p. 94 (1864); Gould, Handb. B. Austr. ii. p. 40 (1865); Finsch, Papag. ii. p. 207 (1868); Schley. Mus. P.-B. Psittaci, Revue, p. 39 (1874); Gieb. Thes. Orn. iii. p. 216 (1877); Diggl. Syn. Austr. B. ii. p. 77, pl. 77, f. 2 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 471 (1878); Rehnw. Vogelbild. t. xvi. f. 2 (1878-83); id. Journ. f. Orn. 1881, p. 123 (Consp. Psitt. p. 59); Salvin, Cat. B. Strickl. Coll. p. 462 (1882); Sclat. List Vert. An. 8th ed. p. 332 (1883); Broadb. Pr. Roy. Soc. Queensl. iii. p. 30 (1886); North, Pr. Linn. Soc. N. S. W. (2) ii. p. 985 (1887); Ramsay, Tab. List, p. 16, n. 487 (1888); North (1888); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 256 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 45 (1891).

Platycercus bernardi, Mitch. Austr. Exped. i. p. xviii (1838). Barnardius typicus, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 168; Souancé, Rev. et Mag. de Zool. 1856, p. 211; Bp. Naumannia,

1856, Consp. Psitt. n. 170. Platycercus semitorquatus (part.), G. R. Gr. List Psitt. Brit. Mus. p. 8, specim. c (1859).

Barnardius barnardi, Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xi (1863); G. R. Gr. Hand-list, ii. p. 138, n. 8001 (1870).

Adult male. Forehead red; crown, checks, chest, abdomen, central portion of wing, and rump verditer-green; the lower part of the cheeks bluish; a broad crescent from the occiput to the eyes greenish brown; nape-collar yellow, more or less tinged with green in the middle; back dark bluish grey; centre of the abdomen crossed by a broad yellow band, more or less tinged with orange; primaries, primary-coverts, and feathers of the spurious wing black, with the outer webs deep blue; the primaries have the apical half of the outer webs grey; smaller wing-coverts deep blue; greater wingcoverts and inner secondaries green; under wing-coverts blue, with verdigris edges; two central tail-feathers deep green, passing into deep blue at the base; the lateral feathers deep blue at the base, gradually fading into bluish white at the tip: "bill horn-colour; feet brown" (Gould). Total length 14 inches, wing 6.5, tail 7.2, bill 0.8, tarsus 0.8.

Female. Like the male, only smaller and duller; the back less

bluish and more greenish.

Young. Much duller than the adult bird and with the red on the forehead much paler.

Hab. South Australia, New South Wales, and the Interior.

a. Ad. sk.

b, c. 2 ad. et ad. sk. d, e, f. Ad. sk. p, q, r. Ad. sk. s, t. Ad. sk.

u, v. Skeletons.

S. Australia. S. Australia.

Australia, March, May. Australia. Australia (J. T. Cockerell). Flinder's Range, S. Aus-

tralia, Oct. Australia.

Linnean Society [P.]. (Type of species.) Sir G. Grey [P.]. Capt. Sturt [P.]. Sir T. Mitchell [P.].

Gould Coll. Salvin-Godman Coll. Hume Coll.

Zoological Soc. Coll.

# 2. Barnardius semitorquatus.

Psittacus semitorquatus, Quoy et Gaim. Voy. Astrol., Zool. i. p. 237, pl. 23 (1830); Thienem. Fortift. d. ges. Vög. p. 73 (1846). Platycercus baueri, Lear (nec Temm.), Parr. pl. 17 (1832).

Conurus cæruleo-barbatus, Bourj. Perr. pl. 40 (1837-38).

Platycercus semitorquatus, Less. Compl. de Buff. ix. p. 221 (1837), 2nd ed. p. 611 (1838); Gould, B. Austr. v. pl. 19 (pt. xi., 1843); G. R. Gr. Gen. B. ii. p. 408, n. 10 (1846); Rchub. Neuentd. Vög. N. Holl. n. 180 (1850); Blyth, Cat. B. Mus. A. S. B. p. 8 (1849); G. R. Gr. List Psitt. Brit. Mus. p. 8 (1859); Schleg. Mus. P.-B. Psittaci, p. 93 (1864); Gould, Handb. B. Austr. ii. p. 42 (1865); Finsch, Papag. ii. p. 209 (1868); Schleg. Mus. P.-B. Psittaci, Revue, p. 39 (1874); Gieb. Thes. Orn. iii. p. 219 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 472 (1878); Rchnw. Vogelbild. t. iii. f. 2 (1878–83); id. Journ. f. Orn. 1881, p. 124 (Consp. Psitt. p. 60); Schat. List Vert. An. 8th ed. p. 332 (1883); Ramsay, Tab. List. p. 169, 1882 (1888). North. December 1882 (1888); Ramsay. Tab. List, p. 16, n. 488 (1888); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 257 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 46 (1891).

Barnardius semitorquatus, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 170; Souancé, Rev. et Mag. de Zool. 1856, p. 211; Bp. Naumannia, 1856, Consp. Psitt. n. 172; Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xi (1863); G. R. Gr. Hand-list, ii. p. 138, n. 8003 (1870).

Adult. Green; head brown-black, a red band on the forehead; cheek-feathers and ear-coverts tipped with deep blue; a broad yellow collar on the lower nape; upper breast dark green with a d. Ad. sk.

slight bluish tinge; lower breast, sides, and under tail-coverts vellowish green; middle of the abdomen bluish green; wing-coverts green, the outer ones yellowish green, the smaller wing-coverts tinged with verdigris: primary-coverts and base of the outer webs of the primaries deep blue; secondaries green; under wing-coverts blue mixed with green; quills black underneath; two central tailfeathers deep green; the next pair also green, passing into blue and ending in bluish white at the tip; the lateral feathers green at the base, passing into blue, and then into bluish white at the tip: "irides dark brown; bill light horn-colour, becoming of a lead-colour on the front of the upper mandible; legs and feet dark brown" (Gould). Total length 17 inches, wing 8, tail 8.5, bill 1.06, tarsus 0.92.

Female. Smaller and duller than the male. Hab. Western and South-western Australia.

a. ♀ ad. sk. King George's Sound, April. b, c. Ad. et imm. W. Australia (J. T. Cockerell). Australia.

Sir G. Grey [P.]. Salvin-Godman Coll.

Purchased.

### 3. Barnardius zonarius.

Psittacus zonarius, Shaw, Nat. Misc. pl. 657 (1789-1813); Kuhl, Consp., Psitt. p. 51 (1820); Desm. Dict. Sc. Nat. xxxix. p. 67 (1826); Voigt, Cuv. Uebers. p. 736 (1831); Thienem. Fortpfl. d. ges. Vög. p. 73 (1846).

Psittacus viridis, Shaw, Gen. Zool. viii. 2, p. 465 (1811).

Psittacus baueri, Temm. MS. (1819); id. Trans. Linn. Soc. xiii. p. 118 (1821); Desm. Dict. Sc. Nat. xxxix. p. 77 (1826).

Psittacus melanocephalus, Brown (nec Linn.), MS., fide Kuhl. Psittaeus cyanomelas, Kuhl, Consp. Psitt. p. 53 (1820); Desm. Dict.

Sc. Nat. xxxix, p. 73 (1826).

Bauer's Parrot, Lath. Gen. Hist. ii. p. 120 (1822).

Platycercus baueri, Vig. Zool. Journ. i. p. 528 (1825); Vig. & Horsf. Trans, Linn. Soc. xv. p. 283 (1826); Steph. Gen. Zool. xiv. 2, p. 121 (1826); Vig. Zool. Journ. iii. p. 245 (1827); Less. Man. d'Orn. ii. p. 146 (1828); Gould, B. Austr. v. pl. 20 (pt. xi., 1843); Thienem. Fortpft. d. ges. Vög. p. 73 (1846); Rchnb. Neuentd. Vög. N. Holl. n. 181 (1850); Sclat. P. Z. S. 1862, p. 322.
Nanodes zonarius, Steph. Gen. Zool. xiv. 2, p. 119 (1826).

Platycercus zonarius, Wagl. Mon. Psitt. p. 534 (1832); Hartl. Syst. Verz. Ges. Mus. p. 84 (1844); G. R. Gr. Gen. B. ii. p. 408, n. 11 (1846); id. List Psitt. Brit. Mus. p. 8 (syn. emend) (1859); Homeyer, Journ. f. Orn. 1859, p. 360; Schleg. Mus. P.-B. Psittaci, p. 94 (1864); Gould, Handb. B. Austr. ii. p. 43 (1865); Finsch, Papag. ii. p. 212 (1868); Schleg. Mus. P.-B. Psittaci, Revue, p. 39 (1874); Garrod, P. Z. S. 1874, p. 587; Gieb. Thes. Orn. iii. p. 221 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 193, n. 473 (1878); Schmidt, P. Z. S. 1880, p. 310; Rehnw. Vogelbild. t. xvi. f. 3(1878-83); id. Journ. f. Orn. 1881, p. 124 (Consp. Psitt. p. 60); Sclat. List Vert. An. 8th ed. p. 332 (1883); Ramsay, Tab. List, p. 16, n. 489 (1888); North, Pr. Linn. Soc. N. S. W. (2) iv. p. 1025 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 48 (1891).

Barnardius zonarius, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 169; Souancé, Rev. et Mag. de Zool. 1856, p. 211; Bp. Naumaunia, 1856, Consp. Psitt. n. 171; Souancé, Icon. Perr. pl. 47 (1857); Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. xi (1863); G. R. Gr. Hand-list, ii. p. 138, n. 8002 (1870).

Very much like *P. semitorquatus*, but smaller, with no red frontal band, or very seldom with a slight indication of it, and with the lower breast and abdomen yellow: "bill horn-colour; feet dark brown" (*Gould*). Total length 15 inches, wing 6.9, tail 8, bill 0.83, tarsus 0.77.

Hab. South Australia and the Interior.

<ul><li>a. Ad. st.</li><li>b. Ad. sk.</li></ul>	S. Australia.		J. Fisher [P.]. Linnean Society [P.].
	Cl. A	(Type of	Linnean Society [P.].  Psittacus baueri, Temm.)
c. Ad. sk. $d-g$ . Ad. et imm.	S. Australia. S.W. Australia	(J. T.	Sir G. Grey [P.]. Salvin-Godman Coll.
sk. h. Imm. sk.	Cockerell). W. Australia.		A. J. Campbell, Esq. [P.].
i. Ad. sk.	Australia.		Gould Coll.

#### 48. PSEPHOTUS.

Type. Psephotus, Gould, B. Austr. v. pl. 36 (pt. xix., 1845) P. hæmatonotus. Range. Australia. Key to the Species. a. Abdomen red. a'. Forehead and cheeks sharply defined blue. a''. Median wing-coverts red; smaller wingcoverts verditer-green; under tail-coverts hæmatorrhous, p. 561. b''. Median wing-coverts brown-olive; smaller wing-coverts blue; under tail-coverts vellow (sometimes partly tinged with red) ..... xanthorrhous, p. 503. b'. Forehead and cheeks not blue. c". Rump turquoise-blue.  $a^{\prime\prime\prime}$ . Median wing-coverts with a red patch; frontal band red ...... pulcherrimus, p. 564. b"". Median wing-coverts with a vellow p. 565. patch; frontal band pale yellow .... chrysopterygius, d". Rump not turquoise-blue but green, with a pale green cross-band; frontal band bright yellow; a spot on the occiput and another on the middle of the upper tailcoverts brown-red ..... multicolor, p. 566. b. Abdomen yellow; rump red..... hæmatonotus, p. 567.

# 1. Psephotus hæmatorrhous.

Platycercus hæmatogaster, part., Gould, P. Z. S. 1837, p. 89; Wiegm. Arch. f. Naturg. 1839, p. 395 (partim); G. R. Gr. Gen. B. ii. p. 408, n. 15 (partim) (1846); id. List Psttt. Brit. Mus. p. 7 (1859); Finsch, Papag. ii. p. 215 (1868); Gieb. Thes. Orn. iii. p. 217 (1877).

Psephotus hæmatogaster, Gould, B. Austr. v. pl. 33 (pt. xxix., 1847); Rehnb. Neuentd. Vög. N. Holl. n. 443 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 193; Souancé, Rev. et Mag. de Zool. 1856, p. 213; Finsch, Ned. Tijdschr. Dierk, i. Berigt. p. x (1863); G. R. Gr. Hand-list, ii. p. 137, n. 7998 (1870); Garrod, P. Z. S. 1873, pp. 466, 634, 1874, p. 587; Forbes, P. Z. S. 1874, pp. 169, 171, figs. 3, 4; Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 487 (1878); Sclat. List Vert. An. 8th ed. p. 333 (1883); North, Pr. Linn. Soc. N. S. W. (2) ii. p. 986 (1887); Ransay, Tab. List, p. 17, n. 502 (1888); Tristr. Cat. Coll. B. p. 77 (1889); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 260 (1889); Ransay, Cat. Austr. Birds, Psittaci, p. 69 (1891).

Psephotus hæmatorrhous, Bp. Naumannia, 1856, Consp. Psitt. v. 198; Gould, Handb. B. Austr. ii. p. 62 (1865); Sclat. P. Z. S. 1861,

Euphemia hæmatogastra, Schleg. Dierent. p. 75 (1862).

Euphema hæmatogaster, Schley. Mus. P.-B. Psittaei, p. 102 (1864);

id. op. cit., Revue, p. 41 (1874).

Platycercus hæmatorrhous, Rchnw. Vogelbild. Taf. xxiii. in the text of P. hæmatogaster; id. Journ. f. Orn. 1881, p. 117 (Consp. Psitt. p. 53).

Adult male. Forehead and face blue; anterior part of the earcoverts dull yellowish; rest of the head, neck, breast, back, and scapulars pale brown-grey; rump and upper tail-coverts nearly of the same colour, but tinged with olive on the rump and olive stained with reddish on the upper tail-coverts; lower part of the breast and flanks yellow; centre of the abdomen, vent, and under tail-coverts crimson-red, each feather having a yellow base and narrow yellow margin; lesser wing-coverts verditer-green and blue; a great patch of a reddish chestnut on the median wing-coverts, the inner greater wing-coverts, and on the outer web of the inner secondaries; anterior greater wing-coverts, primaries, and basal portion of the outer web of the primaries, and the whole outer web of the anterior secondaries deep blue; under wing-coverts also deep blue; two centre tailfeathers olive-green at the base, passing into deep blue towards the tip; the remainder deep blue at the base, largely tipped with white, the blue gradually blending with the white on the external web: "irides dark brown; feet mealy brown; bill horn-colour" (Gould). Total length about 12 inches, wing 5.4, tail 6.3, bill 0.65, tarsus 0.7.

Hab. Australia, in the interior of New South Wales.

a. Ad. st.	New South Wales.	Zoological Society Coll.
b. Ad. sk.	Australia.	Gould Coll.
c. Var. sk.	Australia.	Gould Coll.
d. Var. sk.	Australia.	A. Wiener, Esq. [P.].

The last two specimens have a little tinge of verditer-green on the bend of the wing, some of the median wing-coverts red, and the under tail-coverts in one specimen have more red on them than in the other. I think they belong to P. hamatorrhous rather than to P. vanthorrhous, although they are intermediate between the two.

### 2. Psephotus xanthorrhous.

Platycercus hæmatogaster, part., Gould, P. Z. S. 1837, p. 89; id. B. Austr. 1st ed. pl. 7 (183—?); Mitch. Austr. Exped. i. p. xviii (1838); Wiegm. Arch. f. Naturg. 1839, p. 395 (partim); G. R. Gr. Gen. B. ii. p. 408, n. 15 (partim) (1846); Rohnw. Vogelbild. t. xvii. f. 3 (1878—83); id. Journ. f. Orn. 1881, p. 117 (Consp. Psitt. p. 53). Crimson-bellied Parroquet, Sturt, Exp. Centr. Austr. ii. App. p. 38

(1849).

Psephotus xanthorrhoa, Gould, M.S.; Bp. Compt. Rend. xxx. p. 133 (1850); id. Rev. et Mag. de Zool. 1854, p. 154, n. 194; Gould, Handb. B. Austr. ii. p. 63 (1865); G. R. Gr. Hand-list, ii. p. 137, n. 7999 (1870); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 488 (1878); id. Tab. List, p. 17, n. 502 a (1888).

Psephotus hæmatogaster, Bp. Naumannia, 1856, Consp. Psitt. n. 197;

Sclat. P. Z. S. 1862, p. 185.

Platycereus xanthorrhous, G. R. Gr. List Psitt. Brit. Mus. p. 7 (1859); Finsch, Papag. ii. p. 217 (1868); Gieb. Thes. Orn. iii, p. 220 (1877).

Psephotus hæmatogaster, var. xanthorrhous, North, Descr. Cat. Nests & Eggs Austr. Birds, p. 260 (1889); Ramsay, Cat. Austr. Birds,

Psittaci, p. 70 (1891).

Adult male. Very much like P. hæmatorrhous, but the patch on the wing-coverts, instead of being reddish chestnut, is olive-yellow, the lesser wing-coverts are not verditer-green, but uniform deep blue, the under tail-coverts are yellow instead of red, the yellowish car-crescent is more distinct, and the breast is more or less distinctly mottled, each feather having the centre lighter, pale yellowish: "bill light horn-colour; feet mealy brown" (Gould). Total length from 13 to 12 inches, wing 5.5 to 4.4, tail 7 to 6.6, bill 0.65, tarsus 0.72.

Hab. South Australia.

In this species there is much individual variation, both in size and coloration; some specimens have the yellow under tail-coverts more or less tinged with red, and the same tinge occasionally covers some of the median wing-coverts. The specimens from Cooper's Creek, in the interior of South Australia, may be separated as a distinct race. As Mr. Gould has already pointed out, they have the upper surface much paler; also the breast is much paler, and the olive patch on the median wing-coverts is yellower.

a, b. Ad. sk.	River Murray, S. Australia.	Gould Coll.
e. Ad. sk.	Australia.	Australian Mus. [P.].
d. Ad. sk.	Australia.	Sir T. Mitchell [P.].
e. Ad. st.	S. Australia, Jan.	Capt. Sturt [P.].
f. Ad. sk.	Australia.	Capt. Sturt [P.].
g, h, i. Ad. sk.	Australia.	Gould Coll.
k, l, m. Ad. sk.	Australia (J. T. Cockerell).	Salvin-Godman Coll.

# Var. pallescens.

a, b. Ad. sk.
 b. Cooper's Creek, interior of S. Australia, Oct. (S. White).
 c. Ad. sk.
 Australia.
 Gould Coll.
 Gould Coll.
 2 2 2

### 3. Psephotus pulcherrimus.

Platycercus pulcherrimus, Gould, Ann. & Mag. N. H. xv. p. 114 (1845); G. R. Gr. Gen. B., App. p. 19 (1849); id. List Psitt. Brit. Mus. p. 6 (1859); Finsch, Papag. ii. p. 226 (1868); Gieb. Thes. Orn, iii. p. 219 (1877); Rchnw. Vogelbild. t. xxiii. f. 4 (1878-83); id. Journ. f. Orn. 1881, p. 116 (Consp. Psitt. p. 52); Lumholtz,

(1889) (*Ìbis*, 1890, p. 250). Among Cannibals, p.

Psephotus pulcherrimus, Gould, B. Austr. v. pl. 34 (pt. xxii., 1846); Bluth, Cat. B. Mus. A. S. B. p. 8 (1849); Rehnb. Neuentd. Vog. N. Holl. n. 445 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 197; Souancé, Rev. et Mag. de Zool. 1856, p. 213; id. Nau-mannia, 1856, Consp. Psitt. n. 195; Gould, Handb. B. Austr. ii. p. 67 (1865); Sclat. P. Z. S. 1866, p. 201; G. R. Gr. Hand-list, ii. p. 137, n. 7996 (1870); Garrod, P. Z. S. 1874, p. 587; Diggl. Syn. B. Austr. ii. p. 79, pl. 79. f. 1 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 490 (1878); Schmidt, P. Z. S. 1880, p. 310; Sclat. List Vert. An. 8th ed. p. 334 (1883); Ramsay, Tab. List, p. 17, n. 504 (1888); North, Descr. Cat. Nests & Egys Austr. Birds, p. 261 (1889); Ramsay, Cat. Austr. Birds, Psittaei, p. 72

Euphemia pulcherrima, Schleg. Dierent. p. 75 (1864).

Euphema pulcherrima, Schleg. Mus. P.-B. Psittaci, p. 101 (1864); id. op. cit. Rerue, p. 41 (1874).

Euphema multicolor, part., Schleg. Mus. P.-B. Psittaei, p. 101, n. 3 (1864).

Adult male. Forehead scarlet; crown and nape brown-black; round the eyes stained with red, the feathers tipped with yellowish; sides of the head and neck bluish green; hind neck, back, and scapulars, and also the inner secondaries, greyish brown; rump and upper tail-coverts turquoise-blue, the last with a greenish tinge; above the rump a black cross band; the longer upper tail-coverts tipped with black; throat and breast green, passing into blue on the lower part of the last, each feather edged with blue; sides turquoise-blue; abdomen and under tail-coverts scarlet, each feather edged with pale yellowish; a large red patch on the shoulders, surrounded above and below with brown wing-coverts; carpal edge and under wing-coverts blue; spurious wing, primary-coverts, and quills brown-black; the quills are edged on the outer web with dull blue towards the base, and with greyish towards the apical half: two central tail-feathers olive-brown at the base, passing into blue towards the tip, which is black; the next pair of tail-feathers olive at the base, then pale blue in the middle, and white at the tip: the remaining tail-feathers similarly coloured, but with an irregular black band towards the base, and beyond the black band tinged with greenish on the outer web: "irides dark brown; bill horncolour, becoming blackish grey at the base; legs and feet yellowish brown" (Gould). Total length about 12 inches, wing 5, tail 6.6. bill 0.58, tarsus 0.59.

Female. Like the male, but "less brilliantly coloured and somewhat smaller " (Gould). According to Mr. Ramsay, the female is

like the young male.

Young. Forehead yellowish grey, stained with red; sides of the head and neek and breast greyish, stained with greenish; flanks, abdomen, and under tail-coverts pale blue, middle of the abdomen stained with red; wing-coverts greyish, stained with red; rump, upper tail-coverts, and tail as in the adult bird; quills with a white oblique band on the under surface.

Hab. Eastern Australia, from Port Denison to New South Wales.

<ul> <li>a. Ad. st.</li> <li>b. Ad. st.</li> <li>c, d, e. 3 ad. et</li> </ul>	New South Wales. Australia. Australia.	Purchased. Sir T. Mitchell [P.]. Sir T. Mitchell [P.].
imm. sk. f, y, h. Ad. et imm. sk.	E. Australia (J. T. Cockerell).	Salvin-Godman Coll.
i. Ad. sk. k, l. Ad. sk.	Queensland. Australia.	Tweeddale Coll. Gould Coll.
m. Ad. st., var.	Australia.	A. Wiener, Esq. [P.].

### 4. Psephotus chrysopterygius.

Psephotus chrysopterygius, Gould, P. Z. S. 1857, p. 220; id. Ann. § Mag. N. H. (3) i. p. 150 (1858); id. Journ. f. Orn. 1858, p. 233; id. B. Austr., Suppl. pl. 64 (pt. iii., 1859); id. Haudb. B. Austr. ii. p. 65 (1865); G. R. Gr. Hand-list, ii. p. 137, n. 7995 (1870); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 489 (1878); id. Tab. List, p. 17, n. 503 (1888); id. Cat. Austr. Birds, Psittaci, p. 71 (1891).

Platycercus chrysopterygius, G. R. Gr. List Psitt. Brit. Mus. p. 6 (1859); Gieb. Thes. Orn. iii. p. 216 (1877); Rehnw. Vogelbild. t. xxiii. f. 6 (1878-83); id. Journ. f. Orn. 1881, p. 116 (Consp. Psitt. p. 52).

Platycercus chrysopterygius, Finsch, Papag. ii. p. 224 (1868).

Adult male. Forehead pale yellow; centre of the erown black; sides of the head, neck, throat, breast, upper part of the abdomen, rump, and upper tail-eoverts turquoise-blue, tinged with green on the checks and upper tail-coverts; round the eye a wash of yellow; back of the neck, back, scapulars, inner wing-coverts, and inner secondaries light greyish brown; a large patch on the anterior smaller and median wing-coverts yellow; greater wing-coverts and quills black, edged with blue; under wing-coverts deep blue; middle of the abdomen and under tail-coverts light scarlet, each feather margined with whitish; two central tail-feathers olive-green at the base, passing into deep blue towards the extremity, and tipped with black; the remaining tail-feathers light bluish green, crossed by an irregular oblique band of black; each of them has a stain of bluish green on the outer web near the tip, and the tip white: "irides brown; bill and nostrils bluish horn-colour; feet mealy grey" (Gould). Total length about 9.5 inches, wing 4.3, tail 5.6, bill 0.6, tarsus 0.55.

Another specimen marked *female* looks very much like the male; it is moulting, and shows many feathers of the back olive, remains of the previous stage, and the yellow patch on the shoulders partly greenish.

Young femule\*. Forchead pale yellow, nearly white; crown brown; upper surface and wing-coverts pale olive, with glaucous edges to the feathers; throat and breast pale yellowish green, with a glaucous tinge; the rump and upper tail-coverts and the tail similar to the same parts in the adult bird, but not so bright; the lower part of the abdomen whitish, with faint stains of scarlet; under tail-coverts pale bluish.

Hab. North Australia, from Port Darwin to Gulf of Carpen-

taria.

a, b, c.  $\circlearrowleft$  ad.,  $\$  (?) Lat. 18° S., long. 141° to 142° E. J. R. Elsey [P.]. imm., and juv. sk. (Types of species.)

#### 5. Psephotus multicolor.

Psittacus multicolor, Temm. (nec Gm.) MS. (1819); Brown apud Kuhl, Consp. Psitt. p. 55 (1820); Temm. Trans. Linn. Soc. xiii. p. 119 (1821).

Varied Parrot, Lath. Gen. Hist. ii. p. 182 (1822).

Platycercus multicolor, Vig. & Horsf. Trans. Linn. Soc. xv. p. 283 (1826): Steph. Gen. Zool. xiv. 2, p. 124 (1826); Vig. Zool. Journ. iii. p. 245 (1827); Wagl. Mon. Psitt. p. 528 (1832); Mitch. Austr. Exped. i. p. xviii (1838); G. R. Gr. Gen. B. ii. p. 408, n. 17 (1846); id. List Psitt. Brit. Mus. p. 6 (1859); Finsch, Papag. ii. p. 222 (1868); Russ, Journ. f. Orn. 1871, p. 236; Gieb. Thes. Orn. iii. p. 218 (1877); Relnuc. Logelbild. t. xxiii. f. 8 (1878–83): id. Journ. f. Orn. 1881, p. 115 (Consp. Psitt. p. 51).

Thes. Orn. iii. p. 218 (1877); Rehme. Fogelbild. t. xxiii. f. 8 (1878–83); id. Journ. f. Orn. 1881, p. 115 (Consp. Psitt. p. 51).

Psephotus multicolor, Gould, B. Austr. v. pl. 35 (pt. xviii., 1847); Bp. Consp. Av. i. p. 2 (1850); Rehnb. Neuentd. Vög. N. Holl. n. 444 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 190; Souancé, Rev. et Mag. de Zool. 1856, p. 213; Bp. Naumannia, 1856, Consp. Psitt. n. 194; Selat. P. Z. S. 1859, p. 433, 1800, p. 371, 1861, p. 234, 1862, p. 185; Parker, P. Z. S. 1863, p. 516; Gould, Handb. B. Austr. ii. p. 58 (1865); Selat. P. Z. S. 1869, p. 627; G. R. Gr. Hand-list, ii. p. 137, n. 7994 (1870); Diggl. Syn. B. Austr. ii. p. 79, pl. 79. f. 2 (1877); Ramsuy, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 492 (1878); Selat. List Vert. An. 8th ed. p. 334 (1883); Ramsay, Tab. List, p. 17, n. 505 (1888); Tristr. Cat. Coll. B. p. 77 (1889); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 261 (1889); Clark, Pr. Roy. Soc. South Austr. (F. N. Sect.) 1889, p. 38; Ramsay, Cat. Austr. Birds, Psittaci, p. 73 (1891).

Euphema multicolor, Schleg. Mus. P.-B. Psittaci, p. 100 (1864); id. op. cit. Revue, p. 41 (1874).

Adult male. Bluish green, back and scapulars darker; forehead and a band on the median wing-coverts yellow; occiput reddish chestnut; lower back and rump with three cross bars, two blackish with the feathers edged with blue, and one light bluish between the two black; upper tail-coverts bluish green, with a reddish-orange spot in the middle; abdomen orange-red in the middle, with the hidden part of the feathers yellow; thighs similarly coloured; under

<sup>\* 1</sup> strongly suspect that the bird described and figured by Gould as young is an adult female, and the supposed female to be a moulting male.

tail-coverts yellow, stained with red; smaller upper wing-coverts near the bend of the wing bright blue; bastard-wing, primary-coverts, base of the outer web of the primaries, and under wing-coverts deep blue; apical half of the outer web of the primaries bluish grey; the auterior greater wing-coverts deep blue, the median lighter, the inner ones green, like the inner secondaries; middle tail-feathers blue, black at the tip, brown-green at the base; the outer ones green at the base, passing into lighter green and then into very pale blue towards their tips, which are white; all the tail-feathers, except the four middle ones, crossed by a band of black near the base: "bill horny brown; legs wood-brown" (Gould). Total length about 12 inches, wing 5.5, tail 6.7, bill 0.58, tarsus 0.58.

Female. "The female is attired in a similar style of colours, but is much less brilliant, has the throat and breast yellowish brown, and only an indication of the bands on the occiput and wing-coverts"

(Gould).

Young. Much duller than the adult bird, the forehead greenish yellow; back and scapulars with a greyish tinge; occipital spot pale orange-brown, like the spot on the upper tail-coverts and the band on the median wing-coverts; middle of the abdomen yellow; under tail-coverts pale green.

Hab. South Australia, Victoria, New South Wales, and the

Interior.

a. Ad. sk.

b. ♂ ad. st.
 c. ♂ ad. sk.
 d-h. Ad. sk.
 i. Juv. sk.

S. Australia. River Murray, S. Australia. Australia. Linnean Society[P.].
(Type of species.)
Sir G. Grey [P.].
Sir G. Grey [P.].

Gregory Exped. [C.].

# 6. Psephotus hæmatonotus.

Platycercus hæmatonotus, Gould, P. Z. S. 1837, p. 151; Wiegm. Archiv f. Naturg. 1839, p. 395; Hartl. Erst. Nachtr. Verz. p. 15 (1846); G. R. Gr. Gen. B. ii. p. 408, n. 14 (1846); id. List Psitt. Brit. Mus. p. 6 (1859); Homeyer, Journ. f. Orn. 1859, p. 360; Finsch, Papag. ii. p. 219 (1868); Gieb. Thes. Orn. iii. p. 217 (1877); Rchnw. Vogelbild. t. xxiii. f. 1 (1878–83); id. Journ. f. Orn. 1881,

p. 115 (Consp. Psitt. p. 51).

Nanodes hæmatonotis (sic), Mitch. Austr. Exped. i. p. xviii (1838). Psephotus hæmatonotus, Gould, B. Austr. v. pl. 36 (pt. xix., 1845); Sturt, Exped. Centr. Austr. ii. App. p. 39 (1849); Blyth, Cat. B. Mus. A. S. B. p. 8 (1849); Rehnb. Neuentd. Vög. N. Holl. n. 442 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 192; Souancé, Rev. et Mag. de Zool. 1856, p. 213; Bp. Naumannia, 1856, Consp. Psitt. n. 196; Sclat. P. Z. S. 1862, p. 186; Finsch, Ned. Tijdschr. Dierk. i. Berigt. p. x (1863); Gould, Handb. B. Austr. ii. p. 69 (1865); Russ, Journ. f. Orn. 1869, p. 287, 1870, p. 30; Drachenf. Journ. f. Orn. 1870, p. 149; G. R. Gr. Hand-list, ii. p. 137, n. 7997 (1870); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 492 (1878); Forbes, P. Z. S. 1879, pp. 169, 357; Salvin, Cat. B. Strickl. Coll. p. 462 (1882); Sclat. List Vert. An. 8th ed. p. 334 (1883); Broadh.

Pr. Roy. Soc. Queensl. iii. p. 30 (1886); Ramsay, Tab. List, p. 17, n. 506 (1888); Tristr. Cat. Coll. B. p. 77 (1889); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 262 (1889); Cox & Ham. Pr. Linn. Soc. N. S. W. (2) iv. p. 417 (1889); Clark, Pr Roy. Soc. South Austr. (F. N. Sect.) 1889, p. 38; Ramsay, Cat. Austr. Birds, Psittaci, p. 75 (1891).

Euphemia hæmatonota, Schleg. Dierent. p. 75 (1864).

Euphema hæmatonota, Schleg. Mus. P.-B. Psittaci, p. 101 (1864); id. op. cit. Revue, p. 41 (1874).

Adult male. Head emerald-green, forehead and cheeks bluish green; back and scapulars greyish green; rump scarlet; upper tail-coverts and breast yellowish green; abdomen yellow; thighs dull bluish green; vent and under tail-coverts white, in some very old specimens tinged with pale yellow; wing-coverts bluish green, a greenish-yellow patch on the anterior ones; bastard-wing, primary-coverts, base of the outer webs of the primaries, bend of the wing, and under wing-coverts deep blue; primaries with the apical half of the outer webs grey; the inner secondaries tinged with bluish green on the outer web; central tail-feathers green, passing into blue towards the tip, which is blackish; the remainder of the tail-feathers bluish green at the base, gradually paling towards the tip, which is white: "irides pale brown; bill horn-colour; feet brown" (Gould). Total length 11 inches, wing 5·1, tail 5·7, bill 0·55, tarsus 0·51.

An apparently very old bird has the back, scapulars, and the outer web of the inner secondaries of a pure bluish-green colour, without the greyish tinge, and the vent and under tail-coverts with

a very distinct yellow tinge.

Young. Upper parts olive, more or less greyish; rump and upper tail-coverts green; underparts pale olive, vent and under tail-coverts pale bluish; a dull bluish tinge on the bend of the wing, bastard-wing, primary-coverts, and base of the outer web of the primaries; under wing-coverts greyish blue; the under aspect of the quills shows a white band, formed by white spots on the inner web; tail as in the adult bird, but paler and duller.

Hab, South-eastern Australia, from Wide-Bay District to Victoria,

and also South Australia.

 $a, b. \subsetneq ad. et ad.$ Australia. River Murray, S. Australia. c, d. Ad. sk. River Murray, S. Australia. *e*, *f*. Ad.sk. g. d ad. st. h, i. Ad. sk. S. Australia. River Murray, S. Australia. k, l. Ad. sk. S. Australia. S. Australia. m. Juv. st. *n*−*t*. ♂♀ ad. sk. Australia. u. Ad. st. (var.). Australia.

v. Ad. sk. Variety or hybrid between P. hæmatonotus aud perhaps P. pulcherrimus.

w, x, y. Skeletons.

Sir T. Mitchell [P.].

C. D. E. Fortnum,
Esq. [P.].
Sir G. Grey [P.].
Sir G. Grey [P.].
Gould Coll.
Capt. Sturt [P.].
Purchased.

Mr. J. Abrahams [P.]. Gould Coll.

#### 49. NEOPHEMA. Туре. Nanodes, part., Vig. & Horsf. Trans. Linn. Soc. xv. p. 274 (1826). Nanodes, Sw. (nec V. & H.) Zool. Ill. 2nd ser. N. pulchella. Euphema, part., Wagl. Mon. Psitt. p. 492 (1832). Euphemia, Schleg. Dierent. p. 75 (1864). Neophema, Salvad. MS..... N. pulchella. Range. Southern Australia and Tasmania. Key to the Species\*. a. Upper surface brown; abdomen rosy; under tail-coverts light blue ..... bourkei, p. 570. b. Upper surface green or olive-green; abdomen and under tail-coverts vellow. a'. Frontal band blue, sharply defined. a". Lores yellow or greenish yellow. a". Lores yellow; abdomen yellow; generally without an orange spot. a4. Frontal blue band not reaching behind the eyes; all the upper wingcoverts deep blue: female like male. venusta, p. 570. b. Frontal blue band continued over and behind the eyes; exterior upper wing-coverts blue, the inner ones olive-green like the back; between the exterior blue wing-coverts and the inner olive ones there is a band of verditer-blue: female duller and smaller, and perhaps with the frontal blue band narrower ..... elegans, p. 572. b". Lores greenish yellow; abdomen with a bright orange spot; inner upper wingcoverts green, the outer ones blue .... chrysogastra, p. 573. b". Lores and circle surrounding the eyes pale verditer-blue ..... petrophila, p. 574. b'. Face blue. c". Chest yellow; a red-chestnut spot on the inner upper wing-coverts: female duller, with the lores yellowish, and no red-chestnut spot on the wing-coverts ..... pulchella, p. 575.

d". Chest rich scarlet; no red-chestnut spot on the wing-coverts; wing-coverts lazuline blue: female duller and paler, with the chest olive-green and the lores bluish.

splendida, p. 576.

<sup>\*</sup> Besides the species included in the above Key, there is a nominal one, which most likely was founded on a specimen of one or other of the already known species:—

Euphema souancei, Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 197 (deser. nulla); id. Naumannia, 1856, Consp. Psitt. n. 205 (?); G. R. Gr. List Psitt. Brit. Mus. p. 16 (1859); Finsch, Papag, ii. pp. 159, 919 (1868); G. R. Gr. Hand-list, ii. p. 141, n. 8041 (1820); Gieb. Thes. Orn. ii. p. 132 (1875).

### 1. Neophema bourkei.

Nanodes bourkii, Mitch. Austr. Exp. i. p. xviii (1838) (descr.

Euphema bourkii, Gould, B. Austr. v. pl. 43 (pt. v., 1841); G. R. Gr. Gen. B. ii. p. 411, n.8 (1846); Rchnb. Neuentd. Vöy. N. Holl. n. 169 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 204; id. Naumannia, 1856, Consp. Psitt. n. 207; G. R. Gr. List Psitt. Brit. Mus. p. 17 (1859); Schleg. Mus. P.-B. Psittaci, p. 17 (1859); Schleg. Mus. P.-B. Psittaci, p. 1864); Gould, Handb. B. Austr. ii. p. 80 (1865); Sclat. P. Z. S. 1867, p. 818; G. R. Gr. Hand-list, ii. p. 141, n. 8040 (1870); Garrod, P. Z. S. 1873, pp. 465, 634, 1874, p. 587; Schleg. Mus. P.-B. Psittaci, Revue, p. 41 (1874); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 499 (1878); Rchnw. Vogelbild. t. xiv. f. 2 (1878–83); id. Journ. f. Orn. 1881, p. 46 (Consp. Psitt. p. 46); Sclat. List Vert. An. 8th ed. p. 328 (1883); Ramsay, Tab. List, p. 17, n. 513 (1888); North, Descr. Cut. Nests & Eggs Austr. Birds, p. 264 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 85 (1891). Euphemia bourkei, Schleg. Dierent. p. 75 (1864).

Eurice Burnell, Sciency, Dietem. p. 19 (1864); Gieb. Thes. Orn. iii. p. 216 (1877).

? Psittacula bourki, Cab. Journ. f. Orn. 1874, p. 238.

Adult male. Upper surface brown with a slight reddish tinge; forehead and superciliary band pale blue; a few feathers on the forehead, a superciliary band under the blue one, and a patch under the eyes and anterior part of cheeks whitish: checks pale rosy, each feather edged with brown; feathers of the breast brown, edged with rose-colour; abdomen bright rose-colour; flanks, external upper tail-coverts, and under tail-coverts light blue; wings brown, the anterior wing-coverts, the outer web of the quills, and the under wing-coverts violet-blue; six middle tail-feathers brown, with the external webs tinged with blue; the three outer ones brown at the base of the inner web, blue towards the base of the external web, white on the remaining part: "bill dark horn-colour; legs and feet brown" (Gould). Total length 8.5 inches, wing 4.6, tail 4.3, bill 0.5, tarsus 0.48.

Female. Duller and paler; the blue frontal band wanting. Hab. Interior of New South Wales and of South Australia.

a, b, c. Ad. st.
d, e, f. Ad. sk.
g, h. Ad. sk.
i. ♂ skeleton.

Australia. Australia. Australia.

Capt. Sturt [P.]. Gregory's Expedition [C.]. Gould Coll.

# 2. Neophema venusta.

Psittacus venustus, *Temm. MS.* (1819); *id. Trans. Linn. Soc.* xiii. p. 121 (1821).

Psittacus chrysostomus, Kuhl, Consp. Psitt. p. 50, t. 1 (1820); Voigt, Cuv. Uebers, p. 736 (1831).

Blue-headed Parrakeet, Lath. Gen. Hist. ii. p. 188 (with var. A?) (1822).

Nanodes venustus, Viy. & Horsf. Trans. Linn. Soc. xv. p. 278 (1826);
 Sw. Zool. Ill. 2nd ser. i. pl. 21 (1829); id. Class. B. ii. p. 305 (1836);
 Selby, Nat. Libr., Parrots, pp. 177, 179, pl. xxvii. (1836).

Euphema chrysostoma, Wagl. Mon. Psitt. pp. 492, 544 (1832); Gould, B. Austr. v. pl. 37 (pt. i., 1840); Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); G. R. Gr. Gen. B. ii. p. 411, n. 2 (1846); Blyth, Cat. B. Mus. A. S. B. p. 8 (1849); Rehnb. Neuentd. Vög. N. Holl. n. 166 (1850); Bp. Rev. et May. de Zool. 1854, p. 154, n. 198; Souancé, Rev. et May. de Zool. 1856, p. 214; Bp. Naumannia, 1856, Consp. Psitt. n. 201; G. R. Gr. List Psitt. Erit. Mus. p. 15 (1859); Schleg. Mus. P.-B. Psittaci, p. 103 (1864); Gould, Handb. B. Austr. ii. p. 71 (1865); Schleg. Mus. P.-B. Psittaci, Revue, p. 41 (1874); Diggl. Syn. B. Austr. ii. p. 80, pl. 80, f. 1 (1872); Salv. Cat. B. Strickl. Coll. p. 460 (1882); Sclat. List Vert. An. 8th ed. p. 327 (1883); Tristr. Cat. Coll. B. p. 76 (1889). Conurus chrysostomus, Bourj. Perr. pl. 10 (1837–38).

Lathamus venustus, Less. Compl. de Buff. ix. p. 216 (1837); id. op. cit. 2nd ed. p. 610 (1838).

Euphemia chrysostoma, Schleg. Dierent. p. 75 (1864).

Euphema venusta, Finsch, Papag. ii. p. 163 (1868); G. R. Gr. Hand-list, ii. p. 141, n. 8035 (1870); Gieb. Thes. Orn. ii. p. 133 (1875); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 493 (1878); Rchnw. Vogelbild. t. xiv. f. 7 (1878–83); id. Journ. f. Orn. 1881, P. 46 (Consp. Psitt. p. 46); Legge, Pr. Roy. Soc. Tasm. 1881, p. 238; Ramsay, Tub. List, p. 17, n. 507 (1888); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 262 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 77 (1891).

Platycercus venustus, Forbes, P. Z. 8, 1879, p. 166.

Euphema elegans, Sclat. (nec Gould) P. Z. S. 1879, p. 828.

Adult. A band of deep indigo-blue across the forehead, bordered above by a narrow edging of light blue; lores and region behind the eye yellow; upper parts brownish olive-green; throat, chest, and flanks the same, only paler; abdomen and under tail-coverts yellow, the middle of the abdomen brighter; upper wing-coverts blue; primary-coverts and primaries black, the latter with the outer webs edged with blue; the inner secondaries and also the inner greater wing-coverts like the back; inner web of the quills black; under wing-coverts deep blue; four middle tail-feathers greenish blue; the basal portion of the remainder black on the inner webs, blue on the outer webs, yellow on the apical part: "irides, bill, and feet brown" (Gould). Total length about 9 inches, wing 4.4, tail 4.3, bill 0.51, tarsus 0.5.

Female. Like the male.

Young. Smaller and duller; blue band on the forehead wanting; the yellow colour on the lores and round the eyes much paler; the blue wing-coverts tinged with greenish: "bill and nostrils of a delicate vellow" (Gould).

Hab. New South Wales, South Australia, and Tasmania.

a. Ad. sk.	Australia.	Linnean Society [P.].
b. Ad. sk. c, d. Ad. sk.	Australia ? Australia,	(Type of species.)  Purchased.
e. Ad. sk. f. Ad. sk.	Australia. Australia ( <i>J. T. Cockerell</i> ).	Gould Coll. Salvin-Godman Coll.
g. Ad. sk. h, i, k. Imm. sk.	Australia ? S. Australia.	Tweeddale Coll. Capt. Sturt [P.].

l, m. ♂ ad. et ad. sk.
 n-q. Ad. et imm. sk.
 r, s, t. ♀ ad. et

♂ imm. sk.

Hummock Is., Bass Straits, Jan. (F. M. Rayner). Tasmania.

Tasmania.

Voyage H.M.S. 'Herald.' R. Gunn, Esq. [P.].

C. G. H. Lloyd, Esq. [P.].

### 3. Neophema elegans.

Nanodes elegans, Gould, P. Z. S. 1837, p. 25; Wiegm. Arch. f. Naturg, 1839, p. 395.

Euphema elegans, Gould, B. Austr. v. pl. 38 (pt. ii., 1841); G. R. Gr. Gen. B. ii. p. 411, n. 7 (1846); Thienem. Fortpfl. d. ges. Vög. p. 74, pl. xiv. f. 6 (egg) (1846); Rehnb. Newentd. Vög. N. Holl. n. 164 (1850); Bp. Rev. ei Mag. de Zool. 1854, p. 154, n. 199; Souancé, Rev. et Mag. de Zool. 1856, p. 214; Bp. Naumannis 1856, Consp. Psitt. n. 202; G. R. Gr. List Psitt. Brit. Muv. p. 16 (1859); Homeyer, Journ. f. Orn. 1859, p. 360; Sclat. P. Z. S. 1859, p. 434, 1862, p. 324; Schleg. Mus. P.-B. Psittaci, p. 103 (1864); Gould, Handb. B. Austr. ii. p. 73 (1865); Finsch, Papag. ii. p. 165 (1868); Müll. P. Z. S. 1869, p. 279; Sclat. P. Z. S. 1869, p. 627; G. R. Gr. Hand-list, ii. p. 141, n. 8036 (1870); Schleg. Mus. P.-B. Psittaci, Rerue, p. 41 (1874); Gieb. Thes. Orn. ii. p. 132 (1875); Diggl. Syn. Austr. B. ii. p. 81, pl. 81, f. 2 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 178, n. 495 (1878); Rehnw. Journ. f. Orn. 1881, p. 46 (Consp. Psitt. p. 46); id. Vogelbild. t. xxxiii. f. 8 (1883); Sclat. List Vert. An. 8th ed. p. 327 (1883); Ramsay, Tab. List, p. 17, n. 509 (1888); Tristr. Cat. Coll. B. p. 76 (1889); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 263 (1889); Clark, Pr. Roy. Soc. South Austr. (F. N. Sect.), 1889, p. 39; Ramsay, Cat. Austr. Birds, Psittaci, p. 80 (1891).

Psittacus elegans, Thienem. Fortpfl. d. ges. Vög. p. 74, pl. xiv. f. 6 (egg) (1846).

Euphemia elegans, Schleg. Dierent. p. 75 (1864).

Adult male. Upper parts greenish olive; a band of deep indigoblue across the forehead, bordered above by a narrow edging of light blue, which is continued over the eye; lores yellow; throat, chest, and sides olive-green like the upper parts, but much lighter; abdomen and under tail-coverts bright yellow; in some specimens there is an orange spot in the middle of the abdomen; the upper wing-coverts next to the scapulars olive-green, the outer ones deep blue; between the olive-green and the deep blue ones there is a row of wing-coverts tinged with verdigris; primary-coverts blue-black; the primaries black, deep blue on the outer webs; under wing-coverts deep blue; two central tail-feathers greenish blue, the blue tinge becoming more distinct towards the tip; the next pair bluish green on the outer web, black on the inner, the tip yellow; the remainder bluish at the base of the outer webs, deep blue on the inner webs, yellow on the apical portion: "irides very dark brown; bill dark brown, lighter on the underside; legs and feet dull brown " (Gould). Total length 8.5 inches, wing 4.2, tail 5, bill 0.5, tarsus 0.5.

Female. Like the male, but duller and smaller (Gould), and, according to Reichenow, with the frontal blue band narrower.

Young. Like the female, but with the upper parts darker and greener, and nearly the whole of the underparts olive-green, scarcely paler on the abdomen and under tail-coverts.

Hab. Southern Australia, from New South Wales to Western

Australia.

a, b. Ad. st.S. Australia.Sir G. Grey [P.].c. d ad. sk.R. Murray, S. Australia.Gould Coll.d. Ad. sk.New South Wales.Gould Coll.e, f. Ad. sk.[Tasmauia] (J. T. Cockerell).Salvin-Godman Coll.g. Juv. sk.Australina, W. Australia, Dec.Purchased.

### 4. Neophema chrysogastra.

Orange-bellied Parrot, Lath. Syn. Suppl. i. p. 62 (1787); id. Gen.

Hist. ii. p. 186 (1822).

Psittacus chrysogaster, Lath. Ind. Orn. i. p. 97, n. 45 (1790); Bechst. Kurze Ueb. p. 74 (1811); Shaw, Gen. Zool. viii. p. 468 (1811); Vieill. N. D. xxv. p. 359 (1817); id. Enc. Méth. iii. p. 1394 (1823).

Nanodes pulchellus (part.), Steph. Gen. Zool. xiv. 2, p. 118 (juv.) (1826).

Euphema pulchella (part.), Wagl. Mon. Psitt. p. 543 (av. horn.)

(1832). Euphema aurantia, Gould, P. Z. S. 1840, p. 148; id. B. Austr. v. pl. 39 (pt. ii., 1841); G. R. Gr. Gen. B. ii. p. 411, n. 5 (1846); Rehnb. Neuentd. Vög. N. Holl. n. 165 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 200; Gould, Handb. B. Austr. ii. p. 75 (1865); Selat. P. Z. S. 1873, p. 311; Garrod, P. Z. S. 1874, p. 587; Diggl. Syn. B. Austr. ii. p. 81, pl. 81, f. 1 (1887); Clark, Pr. Roy. Soc. South Austr. (F. N. Sect.), 1889, p. 39.

Euphema chrysogaster, Bp. Rev. et Mug. de Zool. 1854, p. 154, n. 201; Schleg. Mus. P.-B. Psittaci, Revue, p. 41 (1874); Gieb.

Thes. Orn. ii. p. 132 (1875).

Euphema chrysogastra, Souancé, Rev. et Mag. de Zool. 1856, p. 214; Bp. Naumannia, 1856, Consp. Psitt. n. 203; G. R. Gr. List Psitt. Brit. Mus. p. 16 (1859); Schleg. Mus. P.-B. Psittaci, p. 104 (1864); Finsch, Papag. ii. p. 168 (1868); G. R. Gr. Hand-list, ii. p. 141, n. 8037 (1870); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 496 (1878); Rehmv. Vogelbild. t. xiv. f. 6 (1878-83); id. Journ. f. Orn. 1881, p. 47 (Consp. Psitt. p. 47); Sclat. List Vert. An. 8th ed. p. 328 (1883); Legge, Pr. Roy. Soc. Tasm. 1886, p. 238; Ramsay, Tab. List, p. 17, n. 510 (1888); Tristr. Cat. Coll. B. p. 76 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 82 (1891).

Adult. Upper parts, including the upper wing-coverts next to the scapulars, grass-green; frontal band blue, margined before and behind with a very faint line of lighter blue; lores, checks, and breast yellowish green, passing into greenish yellow on the abdomen; on the centre of this a large patch of orange; under tail-coverts yellow; smaller wing-coverts, the carpal ones, the anterior greater wing-coverts, the primary-coverts, the outer webs of the primaries, and the under wing-coverts deep blue; the primaries have the outer web tinged with greenish blue towards the tip; two central tail-feathers bluish green, more bluish towards the tip; the

next on each side similarly coloured, but with the inner web margined with black; the remainder greenish blue on the outer webs, black on the inner, and largely tipped with bright yellow: "irides dark brown; bill dark brown, becoming lighter on the underside; legs and feet dull brown" (Gould). Total length 8.5 inches, wing 4.2, tail 4, bill 0.5, tarsus 0.5.

Female. Duller than the male; the abdominal orange spot neither

so extensive nor so brilliant (Gould).

Young. Much duller than the adult; the blue frontal band but faintly indicated; the underparts more olive; the orange spot on the abdomen very small; the tail more greenish; sometimes some of the quills have a white spot on the inner web.

Hab. South-eastern Australia, from the Clarence-River District to Victoria, and Tasmania; very abundant on the Actæon Islands.

a, b. Ad. et imm. st. c. Imm. sk.	S. Australia. Australia.	Sir G. Grey [P.]. Sir G. Grey [P.].
d. Ad. sk.	Australia.	Purchased.
e. Ad. sk. f. Ad. sk.	Australia. Melbourne.	Sir D. Cooper [P.]. Gould Coll.

### 5. Neophema petrophila.

Euphema petrophila, Gould, P. Z. S. 1840, p. 148; id. B. Austr. v. pl. 40 (pt. xiv., 1844); G. R. Gr. Gen. B. ii. p. 411, n. 6 (1846); Rehnb. Neuentd. Vög. N. Holl. n. 168 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 196; Souancé, Rev. et Mag. de Zool. 1856, p. 214; Bp. Naumannia, 1856, Consp. Psitt. n. 204; G. R. Gr. List Psitt. Brit. Mus. p. 16 (1859); Schleg. Mus. P.-B. Psittaci, p. 104 (1864); Gould, Handb. B. Austr. ii. p. 76 (1865); Finsch, Papag. ii. p. 170 (1868); G. R. Gr. Hand-list, ii. p. 141, n. 8038 (1870); Schleg. Mus. P.-B. Psittaci, p. 52 (1874); Gieb. Thes. Orn. ii. p. 132 (1875); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 497 (1878); Rehnw. Journ. f. Orn. 1881, p. 47 (Consp. Psitt. p. 47); id. Vogelbild. t. xxxiii. f. 9 (1883); Ramsay, Tab. List, p. 17, n. 511 (1888); id. Cat. Austr. Birds, Psittaci, p. 83 (1891).

Adult. Upper parts dull olive-green; under surface the same, but more yellowish, especially on the abdomen, in the centre of which there is often a slight tinge of orange; under tail-coverts yellow; frontal band deep indigo-blue, bounded before and behind with a very narrow line of dull verditer-blue; lores and circle surrounding the eyes dull verditer-blue; upper wing-coverts like the back, except the smaller ones near the bend of the wing and the outer ones, which are verditer-blue; the outer greater wing-coverts are blue; bastard-wing, primary-coverts, and outer webs of the primaries deep blue, the latter are more or less tinged with greenish towards the tip of the outer webs; inner webs of the primaries brown-black; central tail-feathers bluish green; the remainder bluish green at the base, with the inner web brown-black, and largely tipped with bright yellow: "irides very dark brown; upper mandible dark reddish brown: sides of the under mandible light

yellow, the tip bluish grey \*; legs and feet dark brownish grey " (Gould). Total length 8.5 inches, wing 4.3, bill 0.5, tarsus 0.52.

Female. Very much like the male.

Hab. South-western Australia.

u, b. ♂♀ad. sk. Isl. off Cape Lewin, W. Aus-Gould Coll.

c, d. of ad. sk. Freycinet's Harbour, Shark Bay, Voyage H.M.S. April (F. M. Rayner). 'Herald.'

#### 6. Neophema pulchella.

Psittacus pulchellus, Shaw, Nat. Misc. pl. 96 (1792); id. Gen. Hist. viii. p. 470 (1811); Lath. Ind. Orn. Suppl. p. xxi (1802); Vieill. N. D. xxv. p. 358 (1817); Kuhl, Consp. Psitt. p. 50 (1820); Temm. Trans. Linn. Soc. xiii. p. 122 (1821); Sw. Zool. Ill. ii. pl. 73 (1822); Halm, Vöy. aus As. etc. Lief. xviii. t. 5 (1822); Vieill. Enc. Méth. iii. p. 1393 (1823); Sw. Isis, 1829, p. 998; Voigt, Cuv. Uebers. p. 736 (1831); Halm, Orn. Atl., Papag. p. 45, t. 29 (1835).

La Perruche Edwards, Levaill. Perr. pl. 68 (1801).

Turcoisine Parrot, Lath. Syn. Suppl. ii. p. 89 (1802); id. Gen. Hist. ii. p. 185 (1822).

Psittacus edwardsii, Bechst. Kurze Ueb. p. 74, pl. 6. f. 1 (1811). Nanodes pulchellus, Vig. & Horsf. Trans. Linn. Soc. xv. p. 277 (1826); Steph. Gen. Zool. xiv. 2, p. 118 (syn. emend.) (1826); &w. Zool. Ill. 2nd ser. i. pt. 5, n. 21 (1829); Selby, Nat. Libr.,

Parrots, p. 177 (1836).

Lathamus azureus, Less. Tr. d'Orn. p. 205 (1831).

Euphema pulchella, Wayl. Mon. Psitt. pp. 493, 543 (partim) (1832);

Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); Gould, B. Austr. v. pl. 41 (pt. ix., 1844); G. R. Gr. Gen. B. ii. p. 411, n. 1 (syn. emend.) (1846); Blyth, Cat. B. Mus. A. S. B. p. 8 (1849); Bp. Consp. i. p. 2 (syn. emend.) (1850); Rehub. Neuentd. Vöy. N. Holl. n. 167 (1850); Bp. Rev. et Muy. de Zool. 1854, p. 154, n. 202; Souancé, Rev. et May. de Zool. 1856, p. 213; Bp. Naumannia, 1856, Consp. Psitt. n. 200; Bolle, Journ. f. Orn. 1856, pp. 164, 166; G. R. Gr. List Psitt. Brit. Mus. p. 15 (1859); Finsch, Ned. Tijdsehr. Dierk. i. Berigt. p. x (1863); Schley. Mus. P.-B. Psittaci, p. 103 (1864); Gould, Handb. B. Austr. ii. p. 77 (1865); Ramsay, Ibis, 1866, p. 332; Finsch, Papag. ii. p. 161 (1868); Sclat. P. Z. S. 1869, p. 627; Russ, Journ. f. Orn. 1870, pp. 26, 31; G. R. Gr. Hand-list, ii. p. 140, n. 8034 (1870); Sund. Meth. nat. Av. disp. Tent. p. 71 (1872); Garrod, P. Z. S. 1873, pp. 465, 634, 1874, p. 587; Schley. Mus. P.-B. Psittaci, Revue, p. 41 (1874); Gieb. Thes. Orn. ii. p. 132 (1875); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 594 (1878); Rehuw. Vogelbild. t. xiv. f. 3 (1878-83); id. Journ. f. Orn. 1881, p. 48 (Consp. Psitt. p. 48); Salv. Cat. Strickl. Coll. p. 459 (1882); Sclat. List Vert. An. 8th ed. p. 327 (1883); Ramsay, Tub. List, p. 17, n. 508 (1889); North, Descr. Cut. Nests & Egys Austr. Birds, p. 263 (1889); Cox & Ham. Pr. Linn. Soc. N. S. W. (2) iv. p. 417 (1889); Ramsay, Cut. Austr. Birds, Psittaci, p. 78 (1891).

<sup>\*</sup> In the dried skins the bill appears horny brown

Lathamus pulchellus, Less. Compl. de Buff. ix. p. 216 (1837); id. op. cit. 2nd ed. p. 609 (1831).
Psephotus pulchellus, Sclat. P. Z. S. 1860, p. 243.

Adult male. Upper parts green; forehead, stripe over the eye, eheeks, and wing-coverts verditer-blue; across the forehead a band of deeper blue; chest, abdomen, and under tail-coverts rich yellow; sides green; a chestnut-red spot on the inner wing-coverts; outer upper wing-coverts and under wing-coverts bright blue; primary-coverts and primaries deep blue on the outer webs, the latter with a narrow greenish-blue outer edge, especially towards the tips; quills underneath black; four middle tail-feathers green, black at the tip; the remainder bluish green at the base, with the inner web black, and largely tipped with yellow: "irides yellow" (Sir T. Mitchell): "bill and feet dark brown" (Gould). Total length 8.5 inches, wing 4.3, tail 4.3, bill 0.5, tarsus 0.5.

Adult female. Above duller green; frontal band blue, passing over and behind the eyes; a line before the blue frontal band and lores pale yellowish; cheeks tinged with blue; wings as in the male, only duller, and with no red-chestnut spot on the inner upper wing-coverts; throat and breast yellowish green; tail as in the male.

Young male. "Throat and breast yellow-green; only a trace of the red-ehestnut spot on the inner upper wing-coverts" (Finsch).

Hab. South-eastern Australia, from Wide-Bay district to Vietoria. In some specimens there is a distinct red-orange tinge on the middle of the abdomen. Although Gould has stated that the female is like the male, I believe they differ. Certainly the birds which I have described as females do not show any sign of being immature; on the contrary, some have the feathers worn.

# 7. Neophema splendida.

Euphema splendida, Gould, P. Z. S. 1840, p. 147; id. B. Austr. v. pl. 42 (pt. ii., 1841); G. R. Gr. Gen. B. ii. p. 411, n. 4 (1846); Relnib. Newentd. Vög. N. Holl. n. 163, 441 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 203; Souancé, Rev. et Mag. de Zool. 1856, p. 214; Bp. Naumannia, 1856, Consp. Psitt. n. 206; G. R. Gr. List Psitt. Brit. Mus. p. 16 (1859); Schleg. Mus. P.-B. Psittaci, p. 102 (1864); Gould, Handb. B. Austr. ii. p. 79 (1865); Finsch, Papag. ii. p. 159 (1868); G. R. Gr. Hand-list, ii. p. 141, n. 8039 (1870); Schlet. P. Z. S. 1871, p. 102; Garrod, P. Z. S. 1873, pp. 465, 634, 1874, p. 587; Schleg. Mus. P.-B. Psittaci, Revue, p. 41 (1874); Gieb. Thes. Orn. ii. p. 133 (1875); Diggl. Syn. B. Austr. ii. p. 80, pl. 80. ff. 2, 3 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 498 (1878); Rehnw. Vogelbild. t. xiv. f. 1 (1878-83); id. Journ. f. Orn. 1881, p. 48 (Consp. Psitt. p. 48); Schat. List Vert. An. 8th ed. p. 328 (1883); Rams. Tab. List, p. 17, n. 512 (1888); Chark, P. Roy. Soc. South Austr. (F. N. Sect.) 1889, p. 39; Rams. Cat. Austr. Birds, Psittaci, p. 84 (1891).
Euphemia splendida, Schley. Dierent. p. 75 (1864).

Adult male. Face, ear-coverts, and sides of the neek blue, deeper on the forehead and cheeks; upper surface grass-green; occiput and nape green, washed with blue; chest rich scarlet, sides green; abdomen and under tail-coverts yellow; upper wing-coverts pale or lazuline blue; under wing-coverts deep indigo-blue; primary-coverts and primaries black, slightly tinged with blue, the last with greenish outer edges towards the tip; secondaries blue tinged with green, the last inner secondaries green; two central tail-feathers dark green; the next pair green on the outer web, black on the inner; the remaining tail-feathers with the base green on the outer web and black on the inner, and largely tipped with bright yellow, which increases in extent as the feathers recede from the centre: bill black; feet brown. Total length 8 inches, wing 4·4, tail 3·8, bill 0·46, tarsus 0·45.

Female. Much duller than the male; face and upper wing-coverts pale lazuline blue; no yellowish tinge on the lores as in the female of N. pulchella; no scarlet colour on the chest, which is green; upper parts, including the nape and crown, green with orange tinge.

Hab. Southern Australia, from New South Wales to S.W. Aus-

tralia.

a. Ad. st. S. Australia. b, c, d. Ad. sk. S.W. Australia (J. T. Cockerell). e. Ad. sk. Australia. Massena Coll. Salvin-Godman Coll. Gould Coll.

#### 50. CYANORHAMPHUS.

Type.

Range. New Zealand subregion, New Caledonia with the Loyalty Islands, and Society Islands.

# Key to the Species \*.

#### CYANORHAMPHUS HOCHSTETTERI.

Platycercus hochstetteri, Reisch. Tr. New Zeal. Inst. xxi. p. 387 (1889).

"Plumage similar to the preceding (C. unicolor), with the exception that the emerald-green round the bill is not so conspicuous, and that the top of the forehead, a streak below the eye, and a patch on each side of the tail-coverts are brownish red. On the back of the neck the basal half of each feather is yellow. Total length 12-25 inches, bill 1, wing 5-6, primaries 4-25, tail 4-5, tarsus 0-9, middle toe 1-15.

"The female is smaller in size, duller in plumage, and the red is not so

conspicuous." (Reischek.)

Hah. Antipodes Island.

<sup>\*</sup> I am not acquainted with the following species, and therefore cannot place it in the Key; it seems allied to C. erythrotis from Macquarie Island:—

b'. Head green, frontal band brown-black;	emithronotus n 579
Rump green like the back; general colour	erythronotus, p. 579.
green. c'. No red mark on the head, forehead green	
like the crown; no coloured spots on the	• 1 601
sides of the rump	unicolor, p. 581.
yellow; on each side of the rump a	
red or orange spot.  a". Forehead and also the crown more or	
less red.	•
a". Tail entirely green on the upper	
surface. $a^4$ . Upper surface pure grass-green.	
a <sup>5</sup> . Smaller: wing from 4.5 to 5	
inches; ear-spot bright crim- son, longer and more con-	
spicuous.	
$a^6$ . Wing 5 inches	novæ zealandiæ, p. 581.
$b^6$ . Wing 4.75 inches (Buller) $c^6$ . Wing 4.5 to 4.6 inches	rowleyi (?), p. 583. aucklandicus, p. 584.
b. Larger: wing 5.6 to 5.8 inches;	, r
red ear-spot rather dull, not much extended and therefore	
not very conspicuous.	
de. Forehead and crown crimson;	7 501
underparts greener $e^6$ . Forehead crimson, this colour	cooki, p. 584.
scarcely spreading over the	
anterior part of the crown; underparts, including the	
lower part of the cheeks,	
distinctly yellowish	subflavescens, p. 585.
b¹. Upper and under surfaces both with a distinct yellowish tinge	erythrotis, p. 586.
b'''. Tail partly blue.	, ,
c <sup>4</sup> . Tail-feathers towards the tips blue and tipped with light yellowish;	
underparts, including the cheeks,	
greenish yellow $d^{*}$ . Tail conspicuously blue, the lateral	saisseti, p. 586.
feathers partly green on the outer	
webs, the central two feathers	
blue along the middle, and green towards the edges of both webs;	
underparts green	cyanurus, p. 587.
b''. Forehead red or orange, crown yellow. $c'''$ . Frontal band crimson.	
e <sup>4</sup> . Crown golden yellow	auriceps, p. 587.
$d^{\prime\prime\prime}$ . Crown pale yellow	intermedius (?), p. 589.
yellow	malherbei, p. 590.

# Cyanorhamphus ulietanus.

Society Parrot, Lath. Syn. i. p. 250 (1781); id. Gen. Hist. ii. p. 175

(1822).

Psittacus ulietanus, Gm. S. N. i. p. 328, n. 85 (1788) (ex Latham); Lath. Ind. Orn. i. p. 103, n. 61 (1790); Bechst. Kurze Uebers. p. 79 (1811); Vieill. N. D. xxv. p. 358 (1817); Kuhl, Consp. Psitt. pp. 7, 44 (1820); Vieill. Enc. Méth. iii. p. 1394 (1823).

Platycercus ulietanus, Vig. Zool. Journ. i. p. 1533, Suppl. pl. 3 (1825), iii. p. 245 (1827); G. R. Gr. Gen. B. ii. p. 408, n. 33 (1846); Hartl. Wiegm. Archiv, 1852, p. 132; id. Journ. f. Orn. 1854, p. 169; Pelz. Sitzb. k. Ak. Wiss. Wien, xx. p. 166 (1856); G. R. Gr. List Psitt, Brit, Mus. p. 12 (Tanna!) (1859); id. Cat. B. Trop. Isl. p. 29 (1859); Gieb. Thes. Orn. iii. p. 220 (1877); Bull. B. New Zeal. 2nd ed. i. p. 145 (1888).

Cyanorhamphus ulietanus, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 188; id. Naumannia, 1856, Consp. Psitt. n. 193; G. R. Gr. Hand-list, ii. p. 140, n. 8025 (1870); Rehnw. Journ. f. Orn. 1881, p. 41 (Consp. Psitt. p. 41); id. Vogelbild. Nachtr. n. 7 (1883).

Platycercus ulieteanus, Finsch, Journ. f. Orn. 1867, p. 325; id. Papag. ii. p. 271 (1868); Pelz. Ibis, 1873, p. 30; Layard, Ibis, 1880, p. 339; Pelz. u. Lor. Ann. d. naturh. Hoffmus. 1888, p. 38 (type specimen).

Platycercus tannaensis, Finsch, Papag. ii. p. 272 (1868). Psittaeus fuscatus, in Mus. Vindob., Pelz. Ibis, 1873, p. 30.

? Platycercus forsteri, part., Bull. B. New Zeal. 2nd ed. i p. 145 (1888).

Adult. Olive-brown, the head brown-black; rump and the basal upper tail-coverts brown-red, the longest upper tail-coverts olivebrown like the back; underparts olive-yellow; quills, primarycoverts, under wing-coverts, and tail-feathers grey: bill black, with the base of the upper mandible silvery grey; feet brown. Total length about 11 inches, wing 5.3, bill 0.8, tarsus 0.8.

Hab. Ulietea, Society Islands.

a. Ad. sk.

Society Islands \*.

Bullock Coll.

# 2. Cyanorhamphus erythronotus.

Red-rumped Parrakeet, Lath. Syn. i. p. 249, n. 50 (1781); id. Gen. Hist. ii. p. 174 (1822).

? Pacific Parrot, var. B, Lath. Syn. i. p. 253 (1781).

Psittacus novæ seelandiæ, Gm. (nec Sparrm.) & N. i. p. 328, n. 83 (1788) (ex Latham); Bechst. Kurze Uebers, p. 79 (1811),

? Psittaeus pacificus, var.  $\gamma$ , Gm. S. N. i. p. 329 (1788); Lath. Ind.

Orn. i. p. 104 (1790).

Psittacus zealandicus, Lath. (nec Sparrm.) Ind. Orn. i. p. 102, n. 58 (1790); Vieill. N. D. xxv. p. 357 (1817); id. Enc. Méth. iii. p. 1392, pl. 226. f. 2 (1823).

<sup>\*</sup> The locality "Tanna" attributed to this specimen in Gray's List of Parrots' is certainly wrong; in one of the old registers of the British Museum "New Holland" is given as the locality, which, for some reason, was afterwards corrected, in Gray's handwriting, into "Tanna."

Psittacus novæ zeelandiæ, Kuhl, Consp. Psitt. p. 44, var. 1 (1820). Psittacus erythronotus, Kuhl, Consp. Psitt. p. 45, n. 67 (1820) (typus in Mus. Britannico \*).

Psittacus pacificus, var. n. 3, Vieill. Enc. Méth. p. 1387 (1823). Platycercus pacificus, part., Vig. Zool. Journ. i. p. 529 (1825) (Ota-

heite); Steph. Gen. Zool. xiv. p. 122 (1826); Hartl. Wiegm. Archiv, 1852, p. 132; id. Journ. f. Orn. 1854, p. 159.
Platycercus erythronotus, Steph. Gen. Zool. xiv. p. 122, n. 9 (1826);

G. R. Gr. List Psitt. Brit. Mus. p. 12 (1859); id. Cat. B. Trop. *Isl.* p. 29 (1859).

Psittacus pacificus, Forst. MS.; id. Icon. ined. t. 47; id. Descr.

An. p. 238, n. 201 (nec p. 73) (1844).

Platycercus pacificus, Wagl. Mon. Psitt. p. 524 (1832); G. R. Gr. Gen. B. ii. p. 408, n. 29 (1846); Hartl. Journ. f. Orn. 1854, p. 169, B. p. lxiii; G. R. Gr. List Psitt. Brit. Mus. p. 12 (1859); Finsch, Journ. f. Orn. 1867, p. 325; id. Papag. ii. p. 268 (1868); Gieb. Thes. Orn. iii. p. 218 (1877).

? Psittacus platycercus viridis unicolor, Bourj. Perr. (descr., nec t. 34)

(1837-38).

Conurus phaeton, Des Murs, Rev. et Mag. de Zool. 1845, p. 449; Hartl. Wiegm. Archiv, 1852, p. 132; id. Journ. f. Orn. 1854, p. 169.

Platycercus phaeton, Des Murs, Icon. Orn. pl. 16 (1845).

Cyanorhamphus pacificus, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 184; Souancé, Rev. et Mag. de Zool. 1856, p. 212; Bp. Nau-

mannia, 1856, Consp. Psitt. n. 186. Cyanorhamphus erythronotus, G. R. Gr. Hand-list, ii. p. 140, n. 8029 (1870); Rehnw. Journ. f. Orn. 1881, p. 41 (Consp. Psitt.

p. 41); id. Vogelbild. Nachtr. 8 (1883).

Cyanorhamphus forsteri, G. R. Gr. in Mus. Brit., fide Finsch, Papag. ii. p. 270 (1868); G. R. Gr. Hand-list, ii. p. 140, n. 8030 (1870).

Platycercus forsteri, part., in Mus. Brit.; Buller, Tr. N. Zeal. Inst. xi. p. 369 (1879); id. B. New Zeal. 2nd ed. i. p. 145 (1888).

Adult. Upper surface olive-green, feathers of the nape with pale yellow concealed bases; crown and cheeks brighter green; frontal band velvety brown-black; lores, a spot on the ear-eoverts, and rump brown-red; longest upper tail-covert green; under surface bluish green; smaller wing-coverts bluish green; bastard-wing and primary-coverts bright blue; primaries pale violet-blue at the base, duller towards the tip of the outer webs; under wing-coverts bluish green; quills underneath brown-grey; tail above bluish with a bluish-grey tinge, underneath grey: bill black, with the base of the upper mandible silvery grey; "irides golden yellow" (Forster); feet black. Total length about 11.5 inches, wing 5.8, tail 6, bill 0.8, tarsus 0.75. - Paralad.

Hab. Otaheite and Oriadea, Society Islands.

a. Ad. sk. The ch Society Islands.

Massena Coll.

<sup>\*</sup> This type does not seem to have been in existence at the time of the publication of the 'Hand-list.'

# 3. Cyanorhamphus unicolor.

Platycercus unicolor, Vig. P. Z. S. 1831, p. 24; id. Philos. Mag. 1831, p. 303; Wagl. Mon. Psitt. p. 740 (1832); Lear, Parr. pl. 25 (1832); G. R. Gr. Gen. B. ii. p. 408, n. 19 (1846); id. List Psitt. (1832); G. R. Gr. Gen. B. H. p. 403, H. B. (1840); at. Like Potential Prit. Mus. p. 14 (1859); id. Ibis, 1862, p. 229; Bull. Essay on the Orn. N. Zeal. p. 12 (1862); id. Journ. f. Orn. 1862, p. 324; Finsch, ibid. p. 325; id. Papay. ii. p. 289 (1868); Bull. Tr. N. Zeal. Inst. vi. p. 121 (1873); id. B. New Zeal. p. 59 (1873); Gieb. Thes. Orn. iii. p. 220 (1877); Hutt. Ibis, 1886, p. 385 (Antipodes Island); Bull. B. New Zeal. 2nd ed. i. pp. 145, 148 (1888).

Psittacus platycercus viridis unicolor, Bourj. Perr. pl. 34 (fig. after

Lear's pl.) (1837-38).

Cyanorhamphus unicolor, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 185; Souancé, Rev. et Mag. de Zool. 1856, p. 213; Bp. Naumannia, 1856, Consp. Psitt. n. 187; G. R. Gr. Hand-list, ii. p. 140 n. 8024 (1870); Rehnw. Journ. f. Orn. 1881, p. 41 (Consp. Psitt. p. 41); id. Voyelbild. Nachtr. 6 (1883).
? Platycercus fairchildii, Hector (in litt. 1886) (fide Buller).

? Parrakeet (larger species), Reischek, Tr. New Zeal. Inst. xxi. p. 387 (Antipodes Isl.) (1889).

Adult male (type). General colour olive-green, brighter on the forehead, sides of the head, and ear-coverts, lighter or yellowish on the rump and underparts: the base of the outer web of the outer primaries tinged with blue; bastard-wing and primary-coverts bluish green on the inner webs, bright blue on the outer; quills underneath greyish brown; under wing-coverts green; tail above dull green, underneath dull golden olive: bill black, silvery grey towards the base of the upper mandible; legs and feet brown. Total length about 13 inches \*, wing 6, tail about 6, bill 1.05, tarsus 0.9.

Female. Of smaller size and paler plumage than the male; bill grevish white, the upper mandible brownish black in its apical portion, and with a clouded bluish spot in front of each nostril. Wing 5.75 inches, culmen 1, tarsus 0.8.

Hab. Antipodes Island.

I have seen, in the Museum of Cambridge, one of the specimens lately collected by Capt. Fairchild in Antipodes Island; it is not in good condition, but it does not seem to differ from the type.

a. 3 ad. st.

Unrecorded locality.

Zoolog. Soc. Coll. (Type of species.)

# 4. Cyanorhamphus novæ zealandiæ.

Pacific Parrakeet, Lath. Syn. i. p. 252, with var. A, p. 253 (1781); id. Gen. Hist. ii. p. 180 (1822). Psittacus novæ zelandiæ, Sparrm. (nec Gm.) Mus. Carls. t. 28 (1787);

<sup>\*</sup> A specimen mentioned by Sir. W Buller measures, according to Prof. Hutton, 14.25 inches.

Kuhl, Consp. Psitt. p. 44 (with var. 2) (1820); Less. et Garn.

Kant, Consp. 18at. p. 44 (With Val. 2) (1820); Less. et Garn.
Voy. Coq. i. 2, p. 417 (1828); Voigt, Cuv. Uebers. p. 750 (1831).
Psittacus pacificus, Gm. S. N. i. p. 320, n. 88, with var. β (1788);
Lath. Ind. Orn. i. p. 104 (1790); Bechst. Lath. Uebers. p. 80 (1811); Vieill. Enc. Méth. iii. p. 1387 (1823); Forst. MS.; id.
Icon. ined. tt. 45, 46; id. Descr. An. p. 73, n. 80 (1844).
Pacific Parrot, var. D, Lath. Syn. Suppl. ii. p. 87 (1802); id. Gen.
Histi in 170 (1822).

*Hist.* ii. p. 179 (1822).

Platycercus pacificus (part.), Vig. Zool. Journ. i. p. 529 (1825) (New Zealand only); Steph. Gen. Zool. xiv. p. 122 (1826); Vig. Zool. Journ. iii. p. 245 (1827); Lear, Parr. pl. 26 (1832); Ellis, Icon. 12; G. R. Gr. Gen. B. ii. p. 408, n. 30 (1846); Blyth, Cat. B. Mus. A. S. B. p. 8 (1849); G. R. Gr. Ibis, 1862, p. 228; Bull. Essay N. Zeal. Orn. p. 12 (1865); id. New Zeal. Exh. p. 255 (1866); Hector, ibid. p. 276; Hutton, Ibis, 1867, p. 379; Bull. Journ. f. Orn. 1867, p. 324; id. Ibis, 1869, p. 39; Gulliv. P. Z. S. 1875, p. 489.

Lathamus sparmanii (sic), Less. Tr. d'Orn. p. 206 (1831).

Platycercus novæ seelandiæ, Wagl. Mon. Psitt. p. 526 (1832);

Nitzsch, Pterylogr. (Engl. ed.), p. 101 (1867).

Platycercus novæ zeelandiæ, Hartl. Journ. f. Orn. 1854, B. p. lxiii; Rellman, Zoolog. 1861, p. 7467; Pelz. Novara Reise, Vög. p. 96 (1865); ? Travers, Journ. Linn. Soc., Botamy, ix. p. 141 (1867) (Chatham Isl.); ? id. Ibis, 1866, p. 114 (Chatham Isl.); Finsch, Journ. f. Orn. 1867, p. 324 (part.); id. Papag. ii. p. 273 (part.) (1868); Hutt. Ibis, 1870, p. 393; Buller, Ibis, 1870, pp. 456, 457; (1868); Hutt. Ibis, 1870, p. 335; Butter, 10is, 1870, pp. 450, 451; Bull. Trans. N. Zeal. Inst. iii. p. 43 (1870); Finsch, Journ. f. Orn. 1870, p. 326; Hutt. Cat. B. New Zeal. p. 19 (1871); Finsch, Journ. f. Orn. 1872, p. 97; Hutt. Ibis, 1872, p. 245; Finsch, Trans. N. Zeal. Inst. v. p. 207 (1873); ? Travers, ibid. p. 216 (1873) (Chatham Isl.); Pelz. Ibis, 1873, p. 30; Bull. B. New Zeal. p. 58 pl. — f. inf. (1873) (syn. emend.); Finsch, Journ. f. Orn. 1874, pp. 170, 178; Gieb. Thes. Orn. iii. p. 218 (part.) (1877); Bull. B. N. Zeal. 2nd. 2nd. d. j. 137 (part.) pl. — fig. ant. (1888); Pelz. 2. N. Zeal. 2nd ed. i. p. 137 (part.), pl. —. fig. ant. (1888); Pelz. u. Lor. Ann. d. k. naturhist. Hofmus. 1888, p. 38 (type of P. pacificus, Gm.).

Cyanorhamphus novæ zealandiæ, Bp. Rev. et May. de Zool. 1854, p. 133, n. 187; Souancé, Rev. et May. de Zool. 1856, p. 212; Bp. p. 155, h. 161; Soutinee, Rev. et May. de Zoot. 1850, p. 212; Bp. Naumannia, Consp. Psitt. n. 188; Bolle, Journ. f. Orn. 1856, p. 170; Trav. Ibis, 1866, p. 118; G. R. Gr. Hand-list, ii. p. 139, n. 8019 (1870); Selat. P. Z. S. 1872, p. 795; Garrod, P. Z. S. 1873, pp. 466, 634, 1874, p. 587; Forbes, P. Z. S. 1879, p. 19; Rehnw. Vogelbild. t. xvi. f. 7 (1878–83); id. Jown. f. Orn. 1881, p. 42 (Consp. Psitt. p. 42); Selat. List Vert. An. 8th ed. p. 333 (1883); Tristr. Cat. Coll. B. p. 77 (1889).

Platycercus?) frontatus, Licht., fide Bp. Naumannia, l. c.

Cyanorhamphus novæ guineæ, Bp. Naumannia, 1856, Consp. Psitt. n. 189; Selut. Journ. Pr. Linn. Soc. ii. p. 164 (1858); Salvad. Orn. Pap. e Mol. i. p. 145 (1880).

Platycercus novæ guineæ, G. R. Gr. Cat. B. New Guin, p. 38 (1859);

id. List Psitt. Brit. Mus. p. 14 (1859).

Coriphilus novæ zeelandiæ, Schley. Dierent. p. 77 (1864).

Euphema novæ zeelandiæ, part., Schleg. Mus. P.-B. Psittaci, p. 105 (1864); id. op. cit. Revue, p. 42 (1874).

Platycercus aucklandicus, part., G. R. Gr. List Psitt. Brit. Mus. p. 13, specim. a (1859).

Platycercus forsteri, Finsch, Papag. ii. p. 287 (1868); id. Journ. f.

Orn. 1867, p. 325, 1870, p. 327, 1872, p. 97 (= novæ zealandiæ); Bull. B. New Zeal. p. 59 (1873); id. op. cit. 2nd ed. i. pp. 139, 145 (1888).

Cyanorhamphus forsteri, Rchnw. Vogelbild. in the text of C. novæ zeelandiæ, t. xvi. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 43 (Consp. Psitt. p. 43).

Adult male. Green, underneath paler, or yellowish green; forehead, crown, and streak across the eyes terminating on the eareoverts deep crimson; a spot of the same colour, more or less distinct, on each side of the rump; on the nape a broad basal mark of yellowish white, visible only on raising the feathers; quills dusky black, lighter on the under surface; the outer primaries, their coverts, and bastard-wing bright blue on the outer webs; carpal edge blue; under wing-coverts bluish green; tail above green, underneath dull golden olive: "irides cherry-red; upper mandible bluish white, with a black tip; lower mandible bluish black; feet pale brown" (Buller). Total length about 11 inches, wing 5, tail 5·2, bill 0·64, tarsus 0·75.

Adult female. Like the male, only smaller, and the frontal red

cap not so conspicuous.

a. Ad. st.

Young. "Does not differ apparently from the adult" (Buller). Hab. New Zealand.

Sir G. Grev [P.].

New Zealand.

b. Ad. sk.	New Zealand.	New Zealand Co. [P.].
c. Ad. st.	New Zealand.	New Zealand Co. [P.].
	(Type of Platy	cercus forsteri, Finsch *.)
d, e. Ad. st.	New Zealand.	Massena Coll.
f. Ad. st. (var.).	New Zealand.	Purehased.
$g, h. \ \beta \ $ ad. sk.	Dunedin, New Zealand.	Purchased.
i. ♀ ad. sk.	Dunedin, May.	Hume Coll.
k. Ad. sk.	New Zealand.	Tweeddale Coll.
l. ∂ ad. sk.	New Zealand.	Gould Coll.
m. ♂ ad. sk.	New Zealand.	Capt. Stokes [P.].
n. Ad. sk.	New Zealand.	Bullock Coll.
o. ♀ ad. sk.	New Zealand.	Capt. Stokes [P.].

# 5. Cyanorhamphus rowleyi (?).

Platyeercus rowleyi, *Bull. Tr. N. Zeal. Inst.* vii. p. 219 (1874); *Rowl. Orn. Misc.* ii. p. 115, pl. 50 (1877); *Bull. B. New Zeal.* 2nd ed. i. p. 147 (1888).

Cyanorhamphus rowleyi, Rchnw. Vogelbild., in the text of C. zee-landiæ, t. xvi. f. 7 (1878–83); id. Journ. f. Orn. 1881, p. 42 (Consp. Psitt. p. 42); Tristr. Cat. Coll. B. p. 77 (1889).

Adult male. Similar in plumage to C. nove zealandie, but considerably smaller. Total length 10 inches, wing 4.75, tail 5, bill along the ridge 0.55, tarsus 0.65.

<sup>\*</sup> This bird has been described as not having the red spots on the sides of the rump, but in reality the red spot is wanting only on one side, where some feathers are missing; on the other side the red spot is present!

Female. Slightly smaller than the male.

Hab. New Zealand, South Island, Canterbury district, Hen Island (Auraki Gulf) (Reischek).

I am not quite satisfied about this bird being distinct from C. novæ zealandia.

### 6. Cyanorhamphus aucklandicus.

Cyanorhamphus novæ-zealandiæ, part., Souancé, Rev. et Mag. de

Zool. 1856, p. 212 (2 ind. des Hes Auckland).

Cyanorhamphus aucklandicus, Bp. Naumannia, 1856, Consp. Psitt. n. 190; G. R. Gr. Hand-list, ii. p. 140, n. 8023 (1870); Rehnw. Vogelbild. in the text of C. novæ zeelandiæ, t. xvi. f. 7 (1878-83);

id. Journ. f. Orn. 1881, p. 42 (Consp. Psitt. p. 42).

(1859); id. Ibis, 1862, p. 229; Bull. Essay N. Zeal. Orn. p. 12 (1865); id. Journ. f. Orn. 1867, p. 324; Finsch, ibid. p. 325; Pelz. Ibis, 1873, p. 31; Bull. B. New Zeal. p. 59 (1873); id. op. cit. 2nd ed. i. p. 145 (1888).

Euphema novæ zeelandiæ, part., Schleg. Mus. P.-B. Psittaci, p. 105

(1864).

Platycercus novæ zeelandiæ, part., Finsch, Papag. ii. p. 273 (1868); Gieb. Thes. Orn. iii. p. 218 (1877).

Platycercus rowleyi, Reisch. (nec Bull.) Tr. N. Zeal. Inst. xxi. p. 383 (Adam's Isl.) (1889).

Similar to C. novæ zealandiæ, but smaller, with a much smaller bill, the red colour on the vertex and on the ear-coverts less extended. Total length about 9 inches, wing 4.6, tail 4.5, bill 0.56, tarsus 0.56.

Hab. Auckland Islands.

Whether the Auckland Islands birds are constantly smaller than those from New Zealand I cannot say, but it is quite true that some New Zealand birds are not larger than Auckland ones.

a. 3 ad. sk. b. ♀ ad. sk. c. Ad. sk.

Auckland Islands. Auckland Islands. Auckland Islands.

Antarctic Exped. Antarctic Exped. Massena Coll.

# 7. Cyanorhamphus cooki.

Platycercus cookii, G. R. Gr. List Psitt. Brit. Mus. p. 13 (1859); id. Ibis, 1862, p. 228; Bull. Essay N. Zeal. Orn. p. 12 (1865); id. Jown. f. Orn. 1867, p. 324; G. R. Gr. Hand-list, ii. p. 140, n. 8022 (1870); ? Pelz. Ibis, 1873, p. 31; Bull. B. New Zeal. 2nd ed. i. p. 145 (1888).

Platycercus rayneri, G. R. Gr. Ibis, 1862, p. 228 (Norfolk Island) \*; Bull. Essay N. Zeal. Orn. p. 12 (1865); id. Journ. f. Orn. 1887, p. 324; Bull. B. New Zeal. 2nd ed. i. p. 145 (1888) (=pacificus!);

Pelz. Ibis, 1873, p. 31.

Platycercus novæ zeelandiæ, part., Finsch, Papag. ii. p. 273 (1868); Gieb. Thes. Orn. iii. p. 218 (1877).

<sup>\*</sup> Downing, Pr. Roy. Soc. Tasm. iii. p. 208 (1859) (Norfolk Isl.).

Cyanorhamphus rayneri, G. R. Gr. Hand-list, ii. p. 140, n. 8021 (1870); Rehnw. Journ. f. Orn. 1881, p. 42 (Consp. Psitt. p. 42); id. Vogelbild. Nachtr. 9 (1883); Tristr. Cat. Coll. B. p. 77 (1889).

Type. Similar to C. novæ zealandiæ, but larger and with a much stronger bill; the crimson colour on the forehead and vertex more extended; the spot on the ear-coverts slightly indicated by obscure crimson. Total length about 13 inches, wing 5.6, tail 6.9, bill 0.9, tarsus 0.82.

Female. Similar to the male, but smaller.

Hab. Norfolk Island.

Besides the two following specimens I have seen two others, male and female, in Mr. Seebohm's collection. There is no doubt whatever as to *P. rayneri*, Gr., being the same as *C. cooki*.

a. Ad. sk. [New Zealand.] Bullock Coll. (Type of species.)
b. Ad. sk. Norfolk Island, June (F. M. The Admiralty [P.]. Rayner). (Type of Platycercus rayneri.)

### 8. Cyanorhamphus subflavescens. (Plate XVII.)

? Parrot from Lord Howe Island, Phill. Bot. Bay, p. 225 (1789); Gray, Ibis, 1862, p. 231; Finsch, Papag. ii. p. 933 (1868). Cyanorhamphus subflavescens, Salvad. Ann. & Mag. N. H. (6) vii. p. 68 (1891).

Intermediate between *C. cooki* and *C. saisseti*; about the size of *C. cooki*, and very much like it in colour, but of a more yellowish tinge, especially on the underparts, and with the red on the head much reduced and nearly confined to the forehead; the red spot on the ear-coverts not very conspicuous, those on the sides of the rump much extended; the lower cheek-feathers yellowish as in *C. saisseti*, from which the present species differs in being stronger and larger, notwithstanding its shorter tail; the upper parts have a slightly more yellowish tinge, whereas the underparts have the yellow tinge greener; the primaries are less blue and more green, especially towards the apical half of the outer webs; tail below golden-olive, with no greyish tinge, the tips of the tail-feathers not contrasting with the rest: bill bluish black, with the base of the maxilla silvery grey; feet dusky brown. Total length 12·7 to 11·3 inches, wing 5·8 to 5·7, tail 6 to 5·5, bill 0·86 to 0·73, tarsus 0·88 to 0·83.

Hab. Lord Howe Island.

Of the two type specimens the larger one is marked female, and the smaller male, but possibly the labels have been exchanged.

a, b. ♂♀ad. Lord Howe Island, Sept. 7, 1853 Gould Coll. (Voyage H.M.S. 'Herald,' J. Mac- (Types of species.) Gillivray).

# 9. Cyanorhamphus erythrotis.

Platycereus pacificus, part., Vig. Zool. Journ. i. p. 529, Suppl. pl. 1

(1825) (Ins. Macquarriana).

Platycercus erythrotis, Wagl. Mon. Psitt. p. 526 (1832); G. R. Gr. Gen. B. ii. p. 408, n. 31 (1846); id. List Psitt. Brit. Mus. p. 13 (1859); id. Ibis, 1862, p. 228; Bull. Essay N. Zeal. Orn. p. 12 (1865); id. Journ. f. Orn. 1867, p. 324; Pelz. Ibis, 1873, p. 31; Bull. B. New Zeal, 2nd ed. i. p. 145 (1888).

Platycereus pacificus, Bourj. (nec Gm.) Perr. pl. 36 (1838-39).
Cyanorhamphus erythrotis, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 186; Souancé, Rev. et Mag. de Zool. 1856, p. 213; Bp. Naumannia, 1856, Consp. Psitt. n. 191; G. R. Gr. Hand-list, ii. p. 140. n. 8020 (1870); Rchnw. Vogelbild, in the text of C. novæ zeelandiæ, t. xvi. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 43 (Consp. Psitt. p. 43).

Platycercus novæ zeelandiæ, part., G. R. Gr. List Psitt. Brit. Mus. p. 13, specim. d (1859); Finsch, Papag. ii. p. 273 (part.) (1868):

Gieb. Thes. Orn. iii. p. 218 (part.) (1877).

Cyanorhamphus paeificus, G. R. Gr. Hand-list, ii. p. 140, n. 8028 (1870).

Similar to C. novæ zealandiæ, but larger; the green colour paler and more yellowish; the blue colour of the bastard-wing and primary-coverts paler and mixed with green; the outer primaries have very little blue at the base of the outer webs, where the blue eolour is shaded with green; the tail shorter, and of a much paler olive underneath. Total length 12 inches, wing 5.6, tail 5.4, bill 0.8 to 0.71, tarsus 0.82 to 0.79.

Hab. Macquarie Island.

Obs. Of the first two specimens mentioned below, one has a much stronger bill, and this I take to be a male.

a. Ad. sk. Macquarie Island. Massena Coll. b. Ad. st. Macquarie Island. Massena Coll. [New Zealand.] c. Ad. sk. Zool. Soc. Coll. \*.

# 10. Cyanorhamphus saisseti.

Cyanorhamphus saisseti, Verr. et Des Murs, Rev. et Mag. de Zool. 1860, p. 387; Jouan, Mém. Soc. Cherboury, ix. p. 228 (1863); G. R. Gr. Hand-list, ii. p. 140, n. 8031 (1870); Marie, Act. Soc. Linn. Bord. xxvii. p. 327 (1870); id. Ibis, 1877, p. 362; Layard, Ibis, 1878, p. 253, 1879, p. 109; Rehaw. Vogelbild. in the text of C. novæ zeelandiæ, t. xvi. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 43 (Consp. Psitt. p. 43); E. L. & E. L. C. Layard, Ibis, 1882, pp. 524, 543; Tristr. ibid. p. 525; Salv. & Sclat. ibid. (note); Sclat. P. Z. S. 1882, p. 630, pl. xlvi.; id. List Vert. An. 8th ed. p. 333 (1883); Schalow, Journ. f. Orn. 1887, pp. 96, 246; Tristr. Cat. Coll. B. p. 77 (1889).

<sup>\*</sup> I am not quite sure that this specimen really belongs to C. erythrotis, although I do not know any other species to which it may be attributed; it has the yellowish-green general colour with a brown tinge, which may be due to the long exposure in the Galleries of the Museum; it is C. pacificus of Gray's Hand-list, no. 8028.

Platycercus novæ zeelandiæ, part., Finsch, Papag. ii. p. 273 (1868); Gieb. Thes. Orn. iii. p. 218 (1877).

Platycercus saisseti, *Bull. B. New Zeal.* p. 59 (1873); *id. op. cit.* 2nd ed. i. p. 139 (1888).

Adult male. Similar to C. novæ zealandiæ, but larger, having a longer tail, and with the under surface greenish yellow; cheeks and throat more distinctly yellow; the quills are more brightly blue, and the tail-feathers towards the end are distinctly bluish and have the tips yellowish: "irides orange; bill black plumbeous, with the base of the upper mandible bluish grey; legs and feet grey-brown." Total length 12.6 inches, wing 5, tail 6.2, bill 0.65, tarsus 0.7.

Female. Like the male, only smaller. Hab. New Caledonia.

a. ♂ juv. sk.
b. ♂ ad. sk.
c, d. ♂ ♀ ad.
New Caledonia (E. L. Layard).
Tweeddale Coll.
Tweeddale Coll.
E. L. Layard [C.].

# 11. Cyanorhamphus cyanurus. (Plate XVIII.)

? Parroquet from Macaulay's Island, Phill. Bot. Bay, p. 228 (1789); Gray, Ibis, 1862, p. 231; Finsch, Papay. ii. p. 933 (1868).

? Platycercus novæ-zealandiæ, Cheeseman (nec Sparrm.), Tr. & Pr. New Zeal. Inst. xx. p. 165 (1888) (Kermadec Island), xxiii. p. 218 (1891) (Macaulay Island).

Cyanorhamphus cyanurus, Salvad. Ann. & Mag. N. H. (6) vii. p. 68 (1891).

Adult male. Similar to C. nove zealandie, but larger, and with the tail blue, the two central tail-feathers are tinged with green on both webs, the remainder on the outer webs towards the base; under wing-coverts and also the longest under tail-coverts tinged with blue; tail underneath dusky olive, darker than in C. novæ zealandiæ: "iris red"; bill black, with the base of the upper mandible silvery grey; feet dusky. Total length 12.7 inches, wing 6.6, tail 6.5, bill about 0.8, tarsus 0.82.

Hab. Raoul Island of the Kermadec group, and perhaps also Sunday Island (where it has been exterminated by wild cats), Meyer and Macaulay Islands (Cheeseman)\*.

Obs. This is a very distinct species on account of the blue tail.

a. d ad. sk. Raoul Island, 13 July, 1854 (Voyage of Gould Coll. II.M.S. 'Herald'). (Type of species.)

# 12. Cyanorhamphus auriceps.

Pacific Parrot, var. C, Lath. Syn. i. p. 253 (1781); id. Gen. Hist. ii. p. 180 (1822).
Psittacus pacificus, var. \( \delta \), Gm. S. N. i. p. 329 (1788); Lath. Ind.

<sup>\*</sup> Whether the birds from Sunday, Meyer, and Macaulay Islands, also from the Kermadec group, belong to the same species as those from Raoul Island, remains to be ascertained.

Orn. i. p. 104 (1790); Vieill. N. D. xxv. p. 347 (1817); id. Enc. Méth. iii. p. 1387 (1823).

Psittacus auriceps, Kuhl, Consp. Psitt. p. 46 (1820).

P. Buff-crowned Parrot, Lath. Gen. Hist. ii. p. 196 (1822). Platycercus auriceps, Vig. Zool. Journ. i. p. 531 (1825), Suppl. pl. 2 (1825); Steph. Gen. Zool. xiv. p. 123 (1826); Vig. Zool. Journ. iii. p. 245 (1827); Wayl. Mon. Psitt. p. 524 (1832); G. R.

Gr. Gen. B. ii. p. 408, n. 32 (1846); id. List Psitt. Brit. Mus. p. 14 (1859); id. Ibis, 1862, p. 229; Ibis, 1862, p. 285; Petz.
Novara Reis., Vög. p. 97 (1865); Ramsay, Ibis, 1865, p. 156;
Bull. Essay N. Zeul. Orn. p. 12 (1865); id. N. Zeul. Exh. p. 255 Bull. Essay N. Zeul. Orn. p. 12 (1865); id. N. Zeul. Exh. p. 255 (1866); Hector, ibid. p. 266 (1866); Bull. Journ. f. Orn. 1867, p. 324; Finsch, ibid. p. 325 (part.); id. Papug. ii. p. 285 (part.) (1868); Bull. Ibis, 1869, pp. 39, 40; Finsch, Ibis, 1869, p. 379; Hutt. Ibis, 1870, p. 393; Bull. ibid. pp. 456, 457; Finsch, Journ. f. Orn. 1870, p. 326 (part.); Potts, Tr. N. Zeal. Inst. ii. p. 64 (1869); Bull. ibid. iii. p. 44 (1870); Hutt. Cat. B. New Zeal. p. 19 (1871); Travers, Tr. N. Zeal. Inst. iv. p. 206 (1872), v. p. 216 (Chatham Isl.) (1873); Hutt. ibid. p. 223 (Chatham Isl.) (1873); Bull. B. New Zeal. p. 61, pl. — f. sup. (1873); Gieb. Thes. Orn. iii. p. 215 (part.) (1877); Finsch, Ibis, 1882, p. 398; Bull. B. New Zeal. 2nd ed. i. p. 142, pl. — f. post. (1888). Bull. B. New Zeal. 2nd ed. i. p. 142, pl. — f. post. (1888). Perruche poé-téré, esp. 2, Less. Voy. Coq. i. 2, p. 417 (1828).

Platycercus nove zelandiæ, Bourj. (nec auct.) Perr. pl. 37 (1837-38). Euphema auriceps, Licht. Nomencl. Av. p. 72 (1854); Schleg. Mus. P.-B. Psittaci, p. 106 (1864); id. Mus. P.-B. Psittaci, Revue,

p. 42 (1874).

Cyanorhamphus auriceps, Bp. Rev. et Mag. de Zool. 1854, p. 153, n. 189; Souancé, Rev. et Mag. de Zool. 1856, p. 213; Bp. Nau-mannia, 1856, Consp. Psitt. n. 192; Ellm. Zool. 1861, p. 7462; G. R. Gr. Hand-list, ii. p. 140, n. 8026 (1870); Sclat. P. Z. S. 1872, p. 795; Garrod, P. Z. S. 1873, pp. 466, 634, 1874, p. 587; Forbes, P. Z. S. 1879, p. 169; Rehnw. Vogelbild. t. xxi. f. 4 (1878-83); id. Journ. f. Orn. 1881, p. 43 (Consp. Psitt. p. 43); Sclat. List Vert. An. 8th ed. p. 333 (1883); Tristr. Cat. Coll. B. p. 77 (1889).

? Trichoglossus aurifrons (errore?), Layard, Ibis, 1863, p. 243 (Wellington).

Coriphilus auriceps, Schleg. Dierent. p. 77 (1864).

Adult male. Grass-green, paler or more suffused with yellow on the underparts: frontal band connecting the eyes crimson; crown golden vellow; a concealed yellowish-white spot on the nape; a crimson spot on the sides of the rump; quills dusky black, in some specimens (young ones?) crossed on their under surface with a band of pale yellow; bastard-wing, primary-coverts, and the base of the outer webs of the second to fifth primaries indigo-blue, the last edged with green; tail green above, golden olive underneath: "irides pale cherry-red; upper mandible bluish white at the base, black towards the tip; under mandible bluish black; feet pale brown " (Buller). Total length 9.6 inches, wing 4.3, tail 4.7, bill 0.6, tarsus 0.66.

Female. Like the male, only smaller.

Hab. New Zealand, both North and South Islands, and Chatham Islands.

Obs. The Chatham Islands birds are said to be larger, and require comparison.

New Zealand Co. [P.]. a. Ad. st. New Zealand. New Zealand. Massena Coll. b, c. Ad. st. et sk. Gould Coll. d. Ad. sk. New Zealand. e, f. Ad. sk. New Zealand (F. Strange). Capt. Stokes [P.]. g. Ad. sk. New Zealand. Miss R. Stone [P.]. New Zealand. h, i. Ad. sk. et Sir G. Grey [P.]. var. sk. k. ♀ ad. sk. New Zealand. Zool. Soc. Coll. l. Skeleton.

### 13. Cyanorhamphus intermedius.

Cyanorhamphus intermedia (sic), Rehnw. Journ. f. Orn. 1881, p. 44 (Consp. Psitt. p. 44).

Cyanorhamphus intermedius, Rchnw. Journ. f. Orn. 1883, p. 415; id. Vogelbild. Nachtr. 10 (1883).

Similar to *C. auriceps*, but the yellow colour of the crown is paler, greenish yellow as in *C. alpinus*; frontal band carmine. Total length 250 millim., wing 113, tail 133, culmen of the bill 14.

Hab. New Zealand.

I am not acquainted with this species, the description of which I have taken from Reichenow; but I doubt whether it is anything else than *C. auriceps*, which seems to vary a good deal in size.\*

#### \* Cyanorhamphus, sp.

Platycercus malherbi, G. R. Gr. (nee Souancé) List Psitt. Brit. Mus. p. 14 (1859) (Auckland Island and New Zealand); id. Ibis, 1862, p. 229; Finsch, Journ. f. Orn. 1867, p. 325; Bull. B. New Zeal. 2nd ed. i. pp. 143, 145 (=auriceps) (1888).

Cyanorhamphus malherbi, G. R. Gr. (nec Souancé), Hand-list, ii p. 140 n. 8047 (1870) (Auckland Island); Rehnw. Vogelbild. in the text of C. auriceps, t. xxi. f. 4 (1878-83); id. Journ. f. Orn. 1881, p. 44 (Consp. Psitt. p. 44).

Exactly like *C. auriceps*, only smaller; total length 8:3 inches, wing 3:9, tail 4:2, bill 0:47, tarsus 0:61.

Hab. Auckland Island and New Zealand.

Mr. Gray in his 'Hand-list' and also Dr. Reichenow have treated the Auckland bird, of which I think there is a single specimen known, as distinct from C. auriceps, on account of its smaller dimensions; but equally small birds are found in New Zealand; and I doubt whether this smaller form, on which new name would have to be bestowed, can really be separated from C. auriceps: the want of a good series of specimens, properly sexed and from reliable localities, prevents me from expressing a decided opinion on the subject.

a. Ad. sk.	Auckland Islands.	Antarctic Expedition.
b. Ad. sk.	Bay of Islands, New Zealand.	Antarctic Expedition.
c. Ad. sk.	Port Nicholson, south of North Island.	Gould Coll.
d. Ad. sk.	New Zealand.	Tweeddale Coll.

# 14. Cyanorhamphus malherbei.

Cyanorhamphus malherbi, Souancé, Rev. et Mag. de Zool. 1857, p. 98 (Habitat inconnu; type in the Museum of Metz); id. Icon. Perr. pl. 48 (1857); Bp. Compt. Rend. xliv. p. 538 (1852).

Platycerous auriceps, part., Finsch, Papag. ii. p. 285 (juv.) (1868); id. Journ. f. Orn. 1870, p. 326, 1872, p. 92; Bull. B. New Zeal. p. 61 (young) (1873); Gieb. Thes. Orn. ii. p. 215 (1877).

Platycercus alpinus, Bull. Ibis, 1869, p. 39; id. Tr. N. Zeal. Inst. i. p. 109 (1869), ii. pp. 386, 389 (1869); Finsch, ibid. p. 389; id. Ibis, 1869, p. 378; Bull: Ibis, 1870, p. 456; Hutt. Tr. N. Zeal. Lust. v. p. 226 (1872); Sclat. P. Z. S. 1872, p. 795; Bull. B. New Zeal., Introd. p. xvi (1873); Finsch, Journ. f. Orn. 1874, p. 178; Bull. Tr. N. Zeul. Inst. xvi. p. 318 (1884); id. B. New Zeal. 2nd ed. i. p. 146, pl. —. fig. post. (1888). Platycercus sp., Potts, Tr. N. Zeal. Inst. v. p. 185 (1872); Mort.

ibid. p. 225; Hutt. ibid. p. 226 (1872).

Cyanorhamphus alpinus, G. R. Gr. Hand-list, ii. p. 140, n. 8032 (1870); Sclat. P. Z. S. 1872, p. 795 (living in the Zool. Gard.); Rehnac. Vogelbild. t. xxi. f. 3 (1878–83); id. Journ. f. Orn. 1881, p. 44 (Consp. Psitt. p. 44); Sclat. List Vert. An. 8th ed. p. 333 (1883).

Adult male. Resembles C. auriceps, but smaller, the frontal band connecting the eyes orange, the crown very pale yellow; underparts pale green, but with no yellow tinge; spot on the sides of the rump orange; tail underneath dusky grey, without any distinct olive tinge: bill bluish black, with the base of the upper mandible silvery bluish; feet pale brown. Total length 9 to 8.5 inches, wing 4·1, tail 4·5, bill 0·5 to 0·45, tarsus 0·66.

Hab. South Island, New Zealand.

Any one who examines Souance's figure of his C. malherbi will agree that there is no difficulty in identifying F. alpinus, Bull., with it.

a, b. Ad. sk.

Otago, South Island.

Sir W. Buller [P.].

#### 51. NYMPHICUS.

Type. Nymphicus, Wagl. Mon. Psitt. p. 490 (1832) ...... N. cornutus. Plectolophus, Bourj. Perr. pl. 12 (1837–38) ..... N. cornutus.

Range. From New Caledonia to the Loyalty Islands.

# Key to the Species.

a. Crest of two black feathers, tipped with red; a yellow nuchal collar connecting the ear-coverts; pileum red ; face black.....

b. Crest of six turned-up dark green feathers, tipped with paler green; no nuchal collar; middle of the forehead red; face dark green ..... uvæensis, p. 592.

cornutus, p. 591.

## Nymphicus cornutus.

Horned Parret, Lath. Syn. i. p. 248, n. 48, pl. 8 (1781); id. Gen. Hist.

ii. p. 172, pl. 25 (1822); Cook's Voy. pl. on p. 110.
Psittacus cornutus, Gm. S. N. i. p. 327, n. 81 (1788); Bechst.
Kurze Ueb. p. 78, pl. 10 (1811); Vieill. N. D. xxv. p. 357 (1817); Kuhl, Consp. Psitt. p. 45 (1820); Ranz. Elem. di Zool. iii. 2, p. 41, tav. 5. f. 4 (1821); Vieill. Enc. Méth. iii. p. 1393, pl. 224, f. 3 (1823); Voigt, Cuv. Ucbers. p. 750 (1831).

Psittacus bisetis, Lath. Ind. Orn. i. p.102, n. 56 (1790); Shaw, Gen. Zool. viii. 2, p. 452 (1811); Forst. MS.; id. Icon. ined. tab. 43; id. Descr. An. p. 258 (1844).

Platycercus cornutus, Vig. Zool. Journ. i. p. 528 (1825); Steph. Gen. Zool. xiv. 2, p. 123 (1826); Vig. Zool. Journ. iii. p. 245 (1827); G. R. Gr. Gen. B. ii. p. 408, n. 34, pl. 101 (1846); id. List Psitt. Brit. Mus. p. 7 (1859); id. P. Z. S. 1859, p. 164; id. List B. Trop. Isl. p. 28 (1859); Schley. Dierent. pp. 14, 75, with figure (1864); id. Mus. P.-B. Psittaci, p. 95 (1865); Finsch, Papag. ii. p. 241 (1868); Schleg. Mus. P.-B. Psittaci, Revue, p. 39 (1874); Gieb. Thes. Orn. iii. p. 216 (1877).

Nymphicus bisetis, Wagl. Mon. Psitt. pp. 490, 522 (1832).

Plectolophus cornutus, Bourj. Perr. pl. 12 (ex Latham) (1837-38). Nymphicus cornutus, G. R. Gr. List Gen. B. p. 86 (1855); Verr. Rev. et Mag. de Zool. 1860, p. 387, 1862, p. 132; G. R. Gr. Hand-list, fi. p. 138, n. 8000 (1870); Marie, Act. Soc. Linn. Bord. xxvii. p. 327 (1870); id. Ibis, 1877, p. 361; E. L. & E. L. C. Layard, Ibis, 1878, p. 253; Tristr. Ibis, 1879, p. 181; Sclat. P. Z. S. 1879, p. 550, pl. 44 (living in the Zool. Gard.); Oust. Bull. Soc. Philom. Paris, iii. p. 218 (1879); E. L. & E. L. C. Layard, Ibis, 1882, pp. 524, 543; iid. P. Z. S. 1882, pp. 408, 409, pl. xxvi. f. 1; Sclat. P. Z. S. 1882, p. 421; id. List Vert. An. 8th ed. p. 332 (1883); Schal. Journ. f. Orn. 1884, pp. 96, 245; Tristr. Cat. Coll. B. pp. 77, 78 (1889).

Psittacus —, Jouan, Mém. Soc. Cherb. ix. p. 94 (1863).

Cyanorhamphus cornutus, Rchnw. Journ. f. Orn. 1881, p. 44 (Consp. Psitt. p. 44); id. Vogelbild. t. xxiii. f. 2 (1878-83).

Adult male. Green, underneath paler, yellowish green; pileum red, or rather the feathers black with crimson tips; two long and narrow feathers turning backwards black, with red tips; nape and ear-coverts golden yellow; rump washed with yellow; face, or lores, region round the eyes, and posterior part of the cheeks black, posterior and lower part of the cheeks yellowish green like the breast; under tail-coverts green, washed with bluish; bastard-wing, primary-coverts, and outer webs of the primaries deep blue; quills underneath and on the inner web black; under wing-coverts green. with a bluish tinge; tail above blue, green at the base, the feathers with light tips; tail underneath blackish, paler or greyish towards the tips of the feathers: irides orange; bill black, top of the upper mandible bluish; feet grey-brown. Total length about 14 inches, wing 6.7, tail 6.7, bill 0.92, tarsus 0.79.

Female. Like the male, only smaller.

Young. The nape and the ear-coverts less yellow and more green: the light tips of the tail-feathers, especially underneath, have a yellowish tinge; the bill, in the dried skin, horny whitish.

Hab. New Caledonia.

Dombea, N. Caledonia, June (E. L. Tweeddale Coll. a. 3 ad. sk. Layard). Moindou, N. Caledonia, Nov. (E. b. ♀ ad. sk. Tweeddale Coll. L. Layard). New Caledonia. c. 3 ad. sk. Tweeddale Coll. d. 9? ad. sk. New Caledonia. Purchased. New Caledonia. Purchased. e. 3 juv. sk.

## 2. Nymphicus uvæensis.

Nymphicus cornutus, E. L. & E. L. C. Layard (nec Gm.), Ibis, 1880,

p. 231 (Uvea).

Nymphicus uveensis, E. L. & E. L. C. Layard, P. Z. S. 1882, p. 408, pl. 26. f. 2 (Uvea); Sclat. P. Z. S. 1882, p. 421; id. List Vert. An. 8th ed. p. 332 (1883); Rchnw. u. Schal. Journ. f. Orn. 1883, p. 416; Tristr. Cat. Coll. B. p. 78 (1889).

Cyanorhamphus uvaeensis, Rchnw. Vogelbild, Nachtr. 11 (1883).

Adult male. Grass-green; underneath yellowish green; rump with a yellowish tinge; crest formed by six upturned feathers dark green, with lighter tips, the feathers on the forehead at the base of the crest dark green, with red tips; face, or lores, cheeks, and chin dark green; bastard-wing, primary-coverts, and outer webs of the primaries blue; tail green, changing into blue towards the tip; the three lateral tail-feathers of each side blue, with paler tips and very little green towards the base: irides orange; bill black, top (or base) of the upper mandible bluish; feet black. Total length about 12.5 inches, wing 6.1, tail 6, bill 0.91, tarsus 0.61. (Tristram Coll.)

Female. Like the male, only a little smaller.

Hab. Uvéa, and perhaps also Lifu, Loyalty Islands.

a. 2 ad. sk. Uvéa, Loyalty Islands.

Zoological Society.

#### 52. NANODES.

Туре.

N. discolor. Lathamus, Less. Tr. d'Orn. p. 205 (1831) (=Nanodes, Vig. & Horsf.).

Euphema, Wagl. Mon. Psitt. p. 492 (1832) (=Nanodes, Vig. & Horsf.).

(Cf. Forbes, P. Z. S. 1879, pp. 166-174.)

Range. South-eastern Australia and Tasmania.

## 1. Nanodes discolor.

Red-shouldered Parrakeet, Phill. Voy. Botuny Bay, p. 269, pl. 41 (1789); Lath. Gen. Syn. Suppl. ii. p. 90 (1802); id. Gen. Hist. ii. p. 176 (1822).

Psittaeus discolor, Shaw in White's Voy. p. 263, pl. 49 (1790); Lath. Ind. Orn. Suppl. p. xxi (1802); Shaw, Gen. Zool. viii. 2, p. 466 (1811); Bechst. Kurze Ueb. p. 82 (1811); Vicill. N. D. xxv. p. 346 (1817); Kuhl, Consp. Psitt. p. 48 (1820); Sw. Zool. Ill. i. pl. 62 (1820-21); Vieill, Enc. Méth. iii, p. 1386 (1823); Less. Voy. Coq. i. 1, p. 401 (1826), 2, p. 631 (1828); Voigt, Cuv. Uebers. p. 736 (1831).

La Perruche Banks, Levaill. Perr. pl. 50 (1801). La Perruche Latham, Levaill. Perr. pl. 62 (1801).

Psittacus lathami, Bechst. Kurze Uebers. p. 81, pl. 8 (ex Levaill.

pl. 62) (1811).

Psittacus humeralis, Bechst. Kurze Uebers. p. 85, pl. 12 (ex Levaill. pl. 50) (1811); Kuhl, Consp. Psitt. p. 47 (1820); Voigt, Cuv. Uebers. p. 735 (1831).
Psittacus banksianus, Vieill. N. D. xxv. p. 342 (1817) (ex Levaill.

pl. 50); *id. Enc. Méth.* iii. p. 1383 (1823).

Psittacus australis, "Brown," Kuhl (nec Lath.), Consp. Psitt. p. 48

(1820).

Nanodes discolor, Vig. & Horsf. Trans. Linn. Soc. xv. p. 276 (1826); Steph. Gen. Zool. xiv. 2, p. 118 (1826); Less. Man. d'Orn. ii. p. 147 (1828); Sw. Class. B. ii. p. 305 (1836); Selb. Nat. Libr., Parrots, pp. 170, 177 (1836); Schley. Mus. P.-B. Psittaci, p. 114 (1864); G. R. Gr. Hand-list, ii. p. 156, n. 8225 (1870); Sund. Meth. nat. Av. disp. Tent. p. 71 (1872); Schleg. Mus. P.-B. Psittaci, Revue, p. 53 (1874); Rchnuc. Journ. f. Orn. 1881, p. 39 (Consp. Psitt. p. 39); id. Vogelbild. t. xxiii. f. 7 (1878–83).

Trichoglossus? australis, Steph. Gen. Zool. xiv. 2, p. 130 (1826).

Lathamus rubrifrons, Less. Tr. d'Orn. p. 205 (1831).

Euphema discolor, Wagl. Mon. Psitt. p. 545 (1832); G. R. Gr. List Gen. B. p. 66 (1840); Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); G. R. Gr. Gen. B. ii. p. 411, n. 3 (1846); Licht. Nomencl. Av.

p. 72 (1854).

Lathamus discolor, Less. Compl. de Buff. ix. p. 217 (1837), 2nd ed. p. 610 (1838); Gould, B. Austr. v. pl. 47 (pt. i., 1840); Blyth, Cat. B. Mus. A. S. B. p. 12 (1849); Rehnb. Neuentd. Vög. N. Holl. n. 162 (1850); Bp. Consp. i. p. 3 (1850); id. Rev. et Mag. de Zool. 1854, p. 156, n. 294; Souance, Rev. et Mag. de Zool. 1856, p. 226; Bp. Naumannia, 1856, Consp. Psitt. n. 308; id. Compt. Rend. xliv. p. 536 (1857); Gould, Handb. B. Austr. ii. p. 90 (1865); Garrod, P. Z. S. 1873, pp. 466, 634, 1874, p. 587; Diggl. Syn. B. Austr. ii. p. 84, pl. 174 (1877); Ramsay, Pr. Liun. Soc. N. S. W. ii. p. 194, n. 503 (1878); Forbes, P. Z. S. 1879, pp. 168, 171, 174, pl. xvi. ff. 1, 2, 8, 10, 12; Salvin, Cat. B. Strickl. Coll. p. 462 (1882); Sclat. List Vert. An. 8th ed. p. 334 (1883); Legge, Pr. Roy. Soc. Tasm. 1886, p. 238; Ramsay, Tab. List, p. 17, n. 517 (1888); Tristr. Cat. Coll. B. p. 77 (1889); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 266 (1889); Cox & Ham. Pr. Linn. Soc. N. S. W. (2) iv. p. 418 (1889); Ramsay, Cat. Austr. Birds, Psitaci, p. 92 (1891). P. Z. S. 1873, pp. 466, 634, 1874, p. 587; Diggl. Syn. B. Austr.

Trichoglossus discolor, G. R. Gr. List Psitt. Brit. Mus. p. 63 (1859); Finsch, Papag. ii. p. 864 (1868); Pelz. Ibis, 1873, p. 117; Gieb.

Thes. Orn. iii. p. 657 (1877).

Coriphilus discolor, Schleg. Dierent. p. 78 (1864).

Adult male. Green; forehead, anterior part of the cheeks, throat, and under wing-coverts searlet; middle of the crown deep blue; lores and a band bordering the red of the cheeks and throat yellow; sides of the head and ear-coverts tinged with bluish; underparts green, tinged with yellowish; flanks scarlet; the under tail-coverts scarlet, edged with greenish yellow; upper wing-coverts green; the smaller ones, near the bend of the wing, dark red, the outer 2 a VOL. XX.

blue; primary-coverts deep blue, nearly black; primaries black, tinged with blue at the base and narrowly edged with greenish yellow on the outer webs; secondaries green on the outer web, the inner ones with a red spot on the inner webs; tail brown-red, blue towards the tip of the feathers, the three outer tail-feathers on each side almost entirely blue, with a greenish tinge at the tip: "irides rich hazel-yellow; bill horn-colour; feet flesh-brown" (Gould). Total length 10.5 inches, wing 5, tail 5, bill 0.55, tarsus 0.5.

Female. Like the male, only smaller and less bright.

Young. Has the under tail-coverts yellowish green, only the larger ones stained with red.

Hab. South-eastern Australia, from Wide-Bay district to Victoria

and Tasmania.

a. of ad. sk.	Australia, May.	Sir T. Mitchell [P.].
b. Ad. st.	Australia.	Gould Coll.
c. Imm. sk.	Australia.	Gould Coll.
d. Ad. sk.	Australia.	Purchased.
e. Ad. sk.	Australia.	Sir D. Cooper [P.].
f, g. Ad. et imm.	Australia.	Salvin-Godman Coll.
sk.		
h. Ad. sk.	Australia.	Tweeddale Coll.
$i, k. \beta \supseteq ad. sk.$	Tasmania.	Antarctic Exp. [C.].
l. Ad. sk.	Tasmania, July.	J. B. Jukes, Esq. [P.].
m. Imm. sk.	Tasmania,	J. B. Jukes, Esq. [P.].
n, o. ♀ ad. sk.	Tasmania.	C. G. II. Lloyd, Esq. [P.].

## 53. MELOPSITTACUS.

Type. Melopsittacus, Gould, B. Austr. v. pl. 44 (pt. i., 1840). M. undulatus. Range. Southern Australia.

## 1. Melopsittacus undulatus.

Psittacus undulatus, Shaw, Nat. Misc. xvi. pl. 673 (1789-1813); id. Gen. Zool. viii. 2, p. 469 (1811); Kuhl, Consp. Psitt. p. 49 (1820); Desn. Dict. Sc. Nat. xxxix. p. 65 (1826); Voigt, Cuv. Uebers. p. 736 (1831); Thienem. Fortpfl. d. ges. Vög. p. 74 (1846). Undulated Parrot, Lath. Gen. Hist. ii. p. 179, pl. 26 (1822). Nanodes undulatus, Vig. & Horsf. Trans. Linn. Soc. xv. p. 277

(1826); Steph. Gen. Zool. xiv. 2, p. 119 (1826); Lear, Parr. pl. 13 (1832); Selby, Nat. Libr., Parrots, pl. 28 (av. jun.) (1836); Fraser, P. Z. S. 1839, p. 113.

Euphema undulata, Wagl. Mon. Psitt. pp. 493, 545, 707 (1832); Schley. Mus. P.-B. Psittaci, p. 105 (1864); id. op. cit. Revue,

p. 42 (1874).

Sagittifer minor undulatus, Bourj. Perr. pl. 8 (1837–38).

Melopsittacus undulatus, Gould, B. Austr. v. pl. 44 (1840); Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); Gould in Stokes' Voy. Beagle, App. p. 481 (1846); G. R. Gr. Gen. B. ii. p. 410 (1846);
 Leich. Journ. Overl. Exped. to Port Essington, p. 44 (1847); Blyth, Cat. B. Mus. A. S. B. p. 9 (1849); Sturt, Evp. Centr. Austr. ii. App. p. 40 (1849); Bp. Consp. i. p. 2 (1850); Bp. Rev. et Mag. de Zool. 1854, p. 154, n. 205; Hartl. Journ. f. Orn. 1854, p. 257; Souaneé, Rev. et Mag. de Zool. 1856, p. 214; Bolle, Journ. f. Orn. 1856, p. 164; Bp. Naumannia, 1856, Consp. Psitt. n. 208; Elsey, P. Z. S. 1857, p. 27; Zuchold, Journ. f. Orn. 1858, p. 39; G. R. Gr. List Psitt. Erit. Mus. p. 14 (1859); Bolle, Journ. f. Orn. 1859, p. 299; Bennett, Gath. of a Natural. in Austr. p. 228 (1860); Blyth, Ibis, 1862, p. 388; Sclat. P. Z. S. 1862, p. 140; Altham. Rev. et Mag. de Zool. 1864, p. 300; Park. P. Z. S. 1865, pp. 235, 238; Beav. P. Z. S. 1865, p. 632; A. Brehm, Thierl. iii. p. 74 (1865); Gould, Handb. B. Austr. ii. p. 81 (1865); Ransay, Ibis. 1866, p. 332 (Port Denison); Finsch, Papag. ii. p. 137 (1868); Mueller, P. Z. S. 1869, p. 279; Sclat. P. Z. S. 1869, p. 627; Russ, Journ. f. Orn. 1869, p. 82, 1870, p. 30; G. R. Gr. Hand-list, ii. p. 140, n. 8033 (1870); Brehm, Journ. f. Orn. 1871, p. 74; Lühder, ibid. p. 347; Sund. Meth. nat. Av. disp. Tent. p. 71 (1872); Garrod, P. Z. S. 1873, pp. 465, 634, 1874, p. 587; Gieb. Thes. Orn. ii. p. 565 (1875); Diggl. Sym. B. Austr. ii. p. 81, pl. 81. f. 3 (1877); Ransay, Pr. Linn. Soc. N. S. W. ii. p. 194, n. 500 (1878); Forbes, P. Z. S. 1879, p. 166; Braun, Arb. zool.-zoot. Inst. Würzb. v. p. 161 & follow.; id. Verh. d. phys.-med. Ges. Würzb. n. F. xiv. p. 121, xv. p. 120; Rehnw. Vogelbild. t. xiv. f. 4 (1878–83); id. Journ. f. Orn. 1881, p. 37 (Consp. Psitt. p. 37); Salv. Cat. Strickl. Coll. p. 460 (1882); Sclat. List Vert. An. 8th ed. p. 328 (1883); Blus. Journ. f. Orn. 1884, p. 229; Ransay, Tab. List, p. 17, n. 514 (1888); Tristr. Cat. Coll. B. p. 76 (1889); North, Descr. Cat. Nests & Eggs Austr. Birds, p. 264 (1889); Cov. & Ham. Pr. Linn. Soc. N. S. W. (2) iv. p. 447 (1889); Ransay, Cat. Austr. Birds, Psittaci, p. 87 (1891).

Euphemia undulata, Schieg. Dierent. p. 76 (1864).

Adult male. Forehead and crown straw-yellow, the remainder of the head, ear-coverts, nape, upper part of the back, scapulars, and wing-coverts straw-yellow, with black cross bands, broader and crescent-shaped on the upper wing-coverts; lower back, rump, upper tail-coverts, and all the under surface, including the under wingcoverts, pale grass-green, tinged with bluish on the upper and under tail-coverts; cheeks and throat yellow; on the cheeks an oblique band of rich blue, below which are three black circular spots; wings brown, the outer webs of the quills bluish green, margined with greenish yellow; a bluish band towards the base of the quills, with the exception of the first and second, or sometimes only of the first; quills underneath blackish with a whitish band, which on the secondaries becomes yellow; two central tail-feathers blue, the remaining tail-feathers bluish green, crossed in the middle by an oblique band of yellow: "irides straw-yellow; nostrils bright blue (or dark purple, Bennett); bill and feet pale bluish lead-colour" (Gould). Total length 7.5 inches, wing 3.8, tail 4, bill 0.45, tarsus 0.47.

Female. Similar to the male, but with the nostrils brown or grey. Young. Forehead and crown also banded; the black spots on the threat wanting or very small; the green colour of the underparts

tinged with bluish.

Hab. Australia, from the Gulf of Carpentaria and Port Denison on the East through the Interior to New South Wales, Victoria, West and South-west Australia.

α. Ad. st.b. Juv. sk.

Australia.

J. Gould, Esq. [P.]. Gould Coll.

Rev. A. Stong [P.]. Sir T. Mitchell [P.]. c. Ad. sk. Australia, d. Imm. sk. Australia. Australia (J. T. Cockerell). Salvin-Godman Coll. e, f. Ad. sk. g. Ad. sk. S. Australia. Gould Coll. Sir G. Grey [P.]. h. d ad. sk. S. Australia. i. Ad. st. Sir G. Grey [P.]. S. Australia. k. Ad. sk. New South Wales. Hume Coll. Ad. sk.
 m, n. Ad. sk. Gould Coll. New South Wales. J. R. Elsey, Esq. [P.]. N. Australia. Gregory Exp. [C.] o-r. Ad. sk. Australia. s. Imm. sk. Zool. Soc. Coll. t. Ad. st. (var.). J. Abrahams, Esq. [P.]. Australia.

### 54. PEZOPORUS.

Type.

Pezoporus, Illig. Prodr. Mamm. et Av. p. 201 (1811). P. formosus. Range. Australia.

## 1. Pezoporus formosus.

Psittacus formosus, Lath. (nec Scop.) Ind. Orn. i. p. 103, n. 60 (1790); Vieill. N. D. xxv. p. 350 (1817); Kuhl, Consp. Psitt. pp. 7, 43 (1820); Vieill, Enc. Méth. iii. p. 1389 (1823); Desm. Dict. H. N. xxxix. p. 68 (1826); Voigt, Cur. Uebers. p. 750 (1831); Hahn, Orn. Atl. Papag. p. 61, t. 46 (1834).

Psittacus terrestris, Shaw, Mus. Lever. p. 217, pl. — (1792); id. Nat. Misc. vii. pl. 228 (1789–1813); id. Zool. of N. H. n. 1, p. 9, pl. 3 (1794); id. Gen. Zool. viii. p. 454, pl. 66 (1811); Bechst.

Kwze Uebers. p. 86, Taf. 13 (1812). La Perruche ingambe, Levaill. Perr. pl. 32 (1801). Ground-Parrot, Lath. Syn. Suppl. ii. p. 86 (1802); id. Gen. Hist. ii.

p. 137 (1822).

Black-spotted Parrakeet, D'Entrec. Voy. ii. p. 47, pl. 10. Pezoporus formosus, Ill. Prodr. Mamm. et Av. p. 201 (1811); Vig. Schopfords Formosas, Linn. Soc. xv. p. 285 (1826); Steph. Gen. Zool. xiv. p. 126 (1826); Less. Man. d'Orn. ii. p. 152 (1828); Wagl. Mon. Psitt. pp. 490, 520 (1832); Selby, Nat. Libr., Parrots, p. 183, pl. xxix. (1836); Sw. Class. B. ii. p. 305 (1837); Hartl. Syst. Verz. Ges. Mus. p. 84 (1844); Gould, B. Austr. v. pl. 46 (part xviii) 1845); G. R. G. Gen. B. ii. p. 100 (1816). Cond. \*\*Retail Oes. Mas. p. 84 (1844); Golda, B. Alstr. V. pl. 40 (part xviii., 1845); G. R. Gr. Gen. B. ii. p. 409 (1846); Gould in Stokes' Voy. 'Beagle,' i. App. p. 481 (1846); Blyth, Cat. B. Mus. A. S. B. p. 9 (1849); Sturt, Exped. Centr. Austr. ii. App. p. 41 (1849); Bp. Consp. i. p. 1 (1850); id. Compt. Rend. xxx. p. 133 (1850); Rehnb. Neuentd. Vög. N. Holl. n. 440 (1850); Bp. Rev. et May. de Zool. 1854, p. 154, n. 206; id. Naumannia, 1856, Consp. Pait to 2000. Resp. Consp. Res. et May. de Zool. 1856, Consp. Psitt. n. 209; Souancé, Rev. et Mag. de Zool. 1856, n. 215; G. R. Gr. List Psitt. Brit. Mus. p. 17 (1859); Schley. Dierent. p. 76 (1864); Gould, Handb. B. Austr. ii. p. 86 (1865); Pelz. Novara (1804); Gould, Hando, B. Alser, R. p. 80 (1805); Fels. Abdul.
Reis., Vög. p. 97 (1865); Finsch, Papag. ii. p. 148 (1868);
Murie, P. Z. S. 1868, pp. 159, 165; G. R. Gr. Hand-list, ii.
p. 141, n. 8042 (1870); Sund. Meth. nat. Ar. disp. Tent. p. 71
(1872); Diggl. Syn. Anstr. B. pl. 82 (1872); Gieb. Thes. Orn. iii.
p. 75 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194 (1878);
Rehnw. Vogebild. t. xiv. f. 8 (1878-83); id. Journ. f. Orn. 1881, p. 16 (Consp. Psitt. p. 16); Sclat. List Vert. An. 8th ed. p. 329 (1883); Legge, Pr. Roy. Soc. Tasm. 1886, p. 235; North, Pr.

Linn. Soc. N. S. W. (2) ii. p. 410 (1887); Ramsay, Tab. List, p. 17, n. 515 (1888); North, Descr. Cat. Nests & Egys Austr. Birds, p. 265 (1889); Ramsay, Cat. Austr. Birds, Psittaci, p. 88 (1891).

Pezoporus terrestris, Ranz. Elem. di Zool. iii. 2, p. 72, t. v. f. 5

(1821); Less. Tr. d'Orn. p. 206, pl. 19. f. 2 (1831).

Euphema formosa, Schleg. Mus. P.-B. Psittaci, p. 106 (syn. emend.) (1864).

Adult. Green; frontal band dark orange; feathers of the crown and nape with a broad streak of black down the centre; rest of the upper parts with irregular bands of black and yellow; a few black spots on the front neck; breast, abdomen, and under tail-coverts greenish yellow, crossed by numerous blackish bands; quills brown, outwardly greenish, and marked with a yellow spot; wing underneath dark grey with a yellow band: under wing-coverts along the edge of the wing more or less tinged with blue; four central tail-feathers green, crossed by numerous narrow bars of yellow; lateral tail-feathers yellow, crossed by numerous bars of deep green: "bill horn; feet bluish flesh-colour; iris black, with a fine ring of light grey" (Gould). Total length 12.5 inches, wing 5.3, tail 7.7, bill 0.62, tarsus 0.95.

Young. Differs from the adult in wanting the orange band on the forehead.

Hab. Southern and Western Australia and Tasmania.

The Tasmanian birds are darker and greener.

	and the second s	
a. Ad. sk.	S. Australia.	Sir G. Grey [P.].
b. Ad. sk.	S. Australia.	Gould Coll.
c. Ad. sk.	Australia.	J. Rushton, Esq.
		[P.].
<i>d</i> , <i>e</i> , <i>f</i> . Ad. sk.	Australia.	Salvin-Godman Coll.
g. Ad. sk.	Australia.	Tweeddale Coll.
h. Ad. sk.	Swan River.	Dr. R. B. Sharpe
		[P.].
i. Ad. sk.	Australia.	Sir D. Cooper [P.].
k. 3 ad. sk.	Australia.	Purchased.
l, m. Ad. sk.	Tasmania.	Gould Coll.
n. Ad. sk.	Tasmania.	Antarctic Exped.
		[C.].
o. Ad. sk.	Tasmania.	R. Gunn, Esq. [P.].
p. Ad. st.	Tasmania.	R. Gunn, Esq. [P.].
g. Ad. sk.		,, [].
r. s. Nestlines	Sand Plains, near Wanyun	Gorld Coll.
T. S. IVESUIIIPS	Sanu Flams, dear Wanvon	CTORIGICACIII.

### 55. GEOPSITTACUS.

Hills, W. Australia.

Geopsittacus, Gould, P. Z. S. 1861, p. 100 . . . . . G. occidentalis. (Cf. Murie, P. Z. S. 1868, pp. 158–165.)

Range. South-western and South Australia.

st.

## 1. Geopsittacus occidentalis.

Geopsittacus occidentalis, Gould, P. Z. S. 1861, p. 100; id. Handb. B. Austr. ii. p. 88 (1865); Sclat. P. Z. S. 1867, p. 891 (from life); Gould, B. Austr., Suppl. pl. 66 (part iv., 1867); Murie, P. Z. S. 1868, pp. 158, 165; G. R. Gr. Hand-list, ii. p. 141, p. 8043 (1870); Sclat. P. Z. S. 1873, p. 433 (from life); Garrod, P. Z. S. 1874, p. 587, Dical. 1874, p. 587; Diggl. Syn. Austr. B. ii. p. 83 (1877); Rehnw. Journ. f. Orn. 1881, p. 16 (Consp. Psitt. p. 16); id. Vogelbild Nachtr. 1 (1883); Sclat. List Vert. An. 8th ed. p. 329 (1883); Ramsay, Cat. Austr. Birds, Psittaci, p. 91 (1891). Pezoporus occidentalis, Finsch, Papag. ii. pp. 151, 950 (1868); Gieb.

Thes. Orn. iii. p. 75 (1877); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 194 (1878); id. Tab. List, p. 17, n. 516 (1888).

Adult. Upper parts olive-green; the feathers of the pileum and of the hind neck black in the middle, those of the upper back black, with a yellow spot in the middle; lower back, upper tailcoverts, breast, and upper wing-coverts with black spots and irregular yellow bands; cheeks and sides of the neck with small black spots; abdomen sulphur-yellow, sides with irregular black bands; under tail-coverts sulphur-yellow, scarcely spotted with black; wing, primary-coverts, and quills greyish brown; the latter have a yellow band underneath, and, except the first four or five, show a yellow band also on the outer web; tail blackish, with yellow bands, which are complete on the outer feathers: bill horn; feet fleshy. Total length 9.5 inches, wing 5.5, tail 4.1, bill 0.5, tarsus 0.82.

Hab. South-western and South Australia.

a. Ad. sk. W. Australia.

b. 3 ad. st. Gowler Ranges, S. Australia (Dr. Müller). W. Australia.

c, d. Ad. sk.

e. Sternum and bones of the shoulders of spec. b, figured P. Z. S. 1868, p. 163.

Gould Coll. (Type of species.) Zool. Soc. Coll.

Salvin-Godman Coll.

# Family VI. STRINGOPIDÆ.

Sternum incomplete, with only a rudimentary keel; orbital ring complete; bill thick, swollen on the sides, with no notch; underside of the hook provided with a file-like surface; gonys rounded, with five ridges and four grooves; nostrils open in a cere, much swollen. Wing short and rounded; fourth and fifth or even sixth primaries the longest; first nearly equal to the ninth. Tail short, rounded, with the feathers acuminate. Tarsus rather long; nails moderately long and stretched. Feathers rather soft, those surrounding the eyes disposed in a kind of circle, as in the Owls.

Only one genus, confined to New Zealand.

### 1. STRINGOPS.

Type. S. habroptilus.

Strigops, G. R. Gr. Gen. B. ii. p. 426 (1845)...... Strigopsis, Bp. Consp. Gen. Av. i. p. 8 (1850). Stringopsis, Van der Hoeven, Handb. d. Zool. ii. p. 692 Stringops, Finsch, Papag. i. p. 241 (1867).

Range. Confined to New Zealand.

## Key to the Species.

a. Upper surface sap-green; larger ...... habroptilus, p. 599. b. Upper surface bluish; smaller ..... greyi, p. 601.

## 1. Stringops habroptilus.

Centropus (?), G. R. Gr. App. Dieff. N. Zeal. p. 194 (note). Strigops habroptilus, G. R. Gr. Gen. B. ii. p. 427, pl. cv. (1845); Strange, P. Z. S. 1847, p. 50; G. R. Gr. Ann. & Mag. N. H. xx. p. 55 (1847); id. P. Z. S. 1847, p. 62; Pucher. Rev. et Mag. de Zool. 1847, p. 385; Bp. Consp. i. p. 8 (1850); Lyall, P. Z. S. 1852, p. 31, pl. 46 (egg); Rchab. Journ. f. Orn. 1853, Extraheft, p. 38; Bp. Rev. et Mag. de Zool. 1854, p. 157, n. 316; Hartl. Journ. f. Orn. 1854, p. 256, 1855, p. 503; Gould, B. Austr. Suppl. pl. 57 (part ii., 1855); Bp. Naumannia, 1856, Consp. Psitt. n. 330; Souancé, Rev. et Mag. de Zool. 1856, p. 226; G. R. Gr. List Psitt. Brit. Mus. p. 101 (1859); Ellm. Zool. 1861, p. 7467; Haast, Ibis, 1862, p. 103; G. R. Gr. Ibis, 1862, p. 230; Haast, Phil. Inst Canterb. 1863, ; id. Verh. z.-b. Gesell. Wien, 1863, p. 1115; Layard, Ibis, 1863, p. 245; Haast, Ibis, 1864, p. 340; id. Journ f. Orn. 1864, p. 458; Schleg. Dierent. p. 76, cum figura (1864); Parker, P. Z. S. 1865, p. 235; Gould, Handb. B. Austr. ii. App. p. 538 (1865); Travers, Journ. Linn. Soc. ix. Botany, n. 35 (1865) (His, 1866, p. 114); Humbert (Haast), Bull. Soc. Orn. Suisse, 1866, p. 69; Hector, N. Zeal. Exhib. 1866, p. 276; Pelz. Verh.

z.-b. Gesell. Wien, 1867, p. 318 (note); G. R. Gr. Hand-list, ii. z.-b. Gesett. Wien, 1807, p. 515 (note); G. R. Gr. Hand-list, n. p. 172, n. 8416 (1870); Sclat. P. Z. S. 1870, p. 798; Hutton, Ibis, 1870, p. 398 (Auckland?); Wood, Student, 1870, p. 492, with coloured plate); 'Field,' Oct. 15, 1870 (with figure); Sale, 'Field,' Nov. 12, 1870; Sclat. P. Z. S. 1871, p. 102; Hutton, Cat. B. N. Zeal. p. 18 (1871); id. Ibis, 1872, p. 245; Ann. N. H. 1872, x. p. 477; Hutton, Ibis, 1874, p. 35; Buller, Ibis, 1874, p. 113; Eudes-Deslongch, Ann. du Mus. d'Hist. de Caen, i. p. 49 (1885). Stringopsis habroptila, Van d. Hoev. Handb. d. Zool. ii. p. 692 (1855);

Schleg. Handl. i. p. 186 (1857).

Stringops habroptilus, Finsch, Papag. i. p. 246 (1867); Buller, Journ. f. Orn. 1867, p. 323; Finsch, ibid. p. 324; Haast, Jown. f. Orn. 1868, p. 241; Bull. Tr. & Pr. N. Zeal. Inst. i. p. 109 J. Orn. 1808, p. 241; Bull. Ir. & Pr. N. Zeal. Inst. 1. p. 109 (1868); Finseh, Papay. ii. p. 640 (1868); Potts, Tr. & Pr. N. Zeal. Inst. iii. p. 90 (1869); Finseh, Journ. f. Orn. 1870, p. 325; Sundev. Meth. nat. Av. disp. Tent. p. 71 (1872); Finseh, Journ. f. Orn. 1872, p. 96 (descr. & and \( \Perp)\); Sclat. P. Z. S. 1872, p. 185; Garrod, P. Z. S. 1872, p. 788, figs. 4, 5 (tongue), 1873, pp. 465 (two normal carotids), 633; Buller, B. New Zeal. p. 26, pl. — (1873); Finseh, Journ. f. Orn. 1873, p. 24, 1874, p. 178; Haast, P. Z. S. 1874, p. 263; Garrod, P. Z. S. 1874, pp. 589, 596, 598; Selat. P. Z. S. 1874, p. 665, 1876, p. 1. Sharpe. Lea. Bullet. P. Z. S. 1874, p. 263; Garrod, P. Z. S. 1874, pp. 589, 596, 598; Selat. P. Z. S. 1874, p. 665, 1876, p. 1; Sharpe, Voy. Ereb. & Terr., Birds, App. p. 23 (partim) (1875); Forbes, P. Z. S. 1877, p. 307 (bursa Fabricii); Garrod, P. Z. S. 1879, p. 112; Lorenz, Sitzb. Ak. Wissensch. Wien, 1881, p. 624 (skeleton); Meyer, Abbild. Vogel-Skel. i. t. xvii. (1881); Rehnw. Vogelbild. t. xviii. f. 7 (1878-83); id. Journ. f. Orn. 1881, p. 15 (Consp. Psitt. p. 15); Finsch, Ibis, 1882, p. 395; Sclat. List Vert. An. 8th ed. p. 316, f. 45 (1883); Reisch. Tr. & Pr. N. Zeal. Inst. xvii. pp. 190, 195 (1884); Buller, E. New Zeal. 2nd ed. i. p. 176, pl. — (1888); Tristr. Cat. Coll. B. p. 73 (1889). Strigopsis habroptilus, Schleg. Mus. P.-B. Psittaci, p. 107 (1864). Strigopsis habroptilus, Schleg. Mus. P.-B. Psittaci, p. 107 (1864).

Stringops, v. Hügel, Ibis, 1875, pp. 390, 391.

Adult (type). Upper surface sap-green, with a verdigris tinge on the greater wing-coverts, each feather marked in the middle with yellow, which is margined on the sides with black, from which spring irregular transverse bands of the same colour; the feathers of the top of the head brownish black, margined with sap-green, and marked in the middle with greenish; the front, cheeks, earcoverts, and projecting feathers of the face pale umber, marked in the middle with yellowish white; the outer webs of the greater wing-coverts, quills, secondaries, and entire tail brownish buff, irregularly banded transversely with black; between every alternate set lemon-yellow; the inner webs of quills and secondaries black, more or less transversely banded with lemon-yellow; under surface pale greenish yellow, tinged with lemon-yellow, which is narrowly margined with brownish black; some feathers have transverse bands pale yellow and black: "bill yellowish white; tarsi and toes yellowish brown; iris black" (Buller). Total length about 24 inches, wing 11, tail 9, bill 1.8, tarsus 1.75.

Young bird. Similar to the adult in colouring.

Nestling eovered with grey down.

Hab. New Zealand: Middle and North Island, formerly also in South Island.

a. Ad. st.	New Zealand.	Purchased. (Type of species.)
b. & ad. sk.	Milford Sound, New Zealand,	Capt. Stokes [P.].
c. Ad. sk.; d, e.	March 1851. New Zealand.	Capt. Stokes [P.].
Nestl. st. $f, g$ . Ad. sk.	New Zealand.	Sir G. Grey [P.].
<ul><li>h. Var. ad. st.</li><li>i. Skeleton.</li></ul>	New Zealand.	Capt. Stokes [P.]. Sir G. Grey [P.].
k. Skeleton.		Eyton Coll.

## 2. Stringops greyi.

Strigops habroptilus, var., G. R. Gr. List Psitt. Brit. Mus. p. 101 spec. h (1859).

Strigops greyi, G. R. Gr. Ibis, 1862, p. 230; id. Hand-list, ii. p. 172,

n. 8417 (1870); Hutton, Cat. B. N. Zeal. p. 18 (1871). Stringops greyi, Finsch, Papag. i. p. 253 (1867); Buller, Journ. f. Orn. 1867, p. 323; Finsch, ibid. p. 324; id. Papag. ii. p. 941 (1868); Buller, Tr. & Pr. N. Z. Inst. i. p. 109 (1868); Finsch, Journ, f. Orn. 1870, p. 325, 1872, p. 97; Buller, Tr. & Pr. N. Z. Inst. v. p. 405 (1872); Finsch, Journ. f. Orn. 1874, p. 222. Stringops grayi, Finsch, Journ. f. Orn. 1874, p. 178; Gieb. Thes.

Orn. iii. p. 542 (1877).

Strigops habroptilus, Sharpe (nec Gray), Voy. Ereb. & Terr., Birds, App. p. 23, pl. 7 (1875).

Stringops habroptilus, var., Buller, B. New Zeal. 2nd ed. i. p. 176 (1888).

Type. Very much like S. habroptilus, but with the upper surface bluish; the yellow colour is paler and nearly whitish. Dimensions smaller than those of S. habroptilus.

Hab. Unknown, but no doubt some part of New Zealand.

The dimensions cannot be given with exactitude, as the tail and wings are imperfect in the only known specimen, which evidently had been kept in confinement, and which, according to some ornithologists, is only an individual variety of the common species.

a. Ad. ? sk. New Zealand (?). Sir G. Grey [P.]. (Type of species.)



# APPENDIX.

#### DOUBTFUL SPECIES OF PARROTS.

Dr. Finsch at the end of his 'Monograph of Parrots' gives an Appendix containing doubtful species which have been named and described by different authors; I have been able to identify a few of them\*, but the majority are either fabulous birds, or so badly described as to defy identification; still they cannot be ignored in a general Catalogue. I divide them for convenience' sake, as has been done by Dr. Finsch, into long-tailed and short-tailed species.

## A. Long-tailed Species.

### 1. Psittacus ater.

Ararauna ou Machao, De Laët, Descr. des Ind. Occident. p. 490 (1630). Ara noir, Buff. Hist. Nat. Ois. vi. p. 202 (1779).

Black Maccaw, Lath. Syn. i. p. 206 (1781); id. Gen. Hist. ii. p. 110

Psittacus ater, Gm. S. N. i. p. 314, n. 54 (1788); Lath. Ind. Orn. i. p. 84, n. 7 (1790); Shaw, Gen. Zool. viii. 2, p. 399 (1811); Bechst. Kurze Ueb. p. 66 (1811–12); Kuhl, Consp. Psitt. p. 94 (1820); Finsch, Papag. ii. p. 907 (1858).

Blackish, with a strong gloss of green; reddish eyes and bill and yellow legs.

Hab. Guiana.

### 2. Ara, sp.

Ara sp., Humboldt, Reise Acq. Geg. &c. iv. p. 6 (1860); Finsch, Papag. ii. p. 935 (1868); id. P. Z. S. 1869, p. 128.

"In one of the huts of the Pacimonales (San Francisco Solano, on the left side of the Casiquiaré) we bought an Ara, about 17 inches long, and of an entirely purple plumage, like the Psittacus maeac."

Dr. Finsch rightly says that if the information is correct, the bird must

be new!

<sup>\*</sup> Psittaeus gramineus, Gm., = Tanygnathus gramineus; "Parrot from Lord Howe's Island," Phill., = Cyanorhamphus subflavescens, Salvad.; "Parroquet from Macaulay's Island," Phill., = Cyanorhamphus cyanurus, Salvad.

### 3. PSITTACUS LEVERIANUS.

Crimson-vented Parrot, Lath. Syn. i. p. 229, n. 31 (1781); id. Gen. Hist. ii. p. 150 (1822).

Fsittacus leverianus, Gm. S. N. i. p. 322, n. 67 (1788); Bechst. Kurze Ueb. p. 72 (1811-12); Wagl. Mon. Psitt. p. 742 (av. dub.) (1832); Finsch, Papag. ii. p. 907 (1868).

Psittacus erythropygius, Lath. Ind. Orn. i. p. 94, n. 35 (1790); Shaw, Gen.
Zool. viii. 2, p. 443 (1811); Vieill. N. D. xxv. p. 352 (1817); Kuhl,
Consp. Psitt. p. 98 (1820); Vieill. Enc. Méth. iii. p. 1390 (1823).

Green; head and neck yellow; vent scarlet; quills blue; tail-feathers tipped with blue; bill dusky; tail cuneiform. Size rather large, nearly that of Psittacus æstivus.

Hab. East Indies?

#### 4. PSITTACUS INCARNATUS.

Little Red-winged Parrakeet, Edw. Glean. v. p. 53, pl. 236 (1743); Lath. Syn. i. p. 246 (1781).

Psittaca indica, Briss. Orn. iv. p. 341 (1760) (ex Edwards).

Perruche à gorge rouge, Buff. Hist. Nat. Ois. vi. p. 157 (1779); Levaill.

Perr. i. p. 133, pl. 46 (1801) (ex Edwards?).

Psittaeus incarnatus, Gm. S. N. i. p. 327, n. 79 (1788) (ex Edwards); Lath. Ind. Orn. i. p. 101, n. 54 (1790); Shaw, Gen. Zool. viii. 2, p. 456 (1811); Bechst. Kurze Ueb. p. 75 (1812); Vicill. N. D. xxv. p. 348 (1817); Kuhl, Consp. Psitt. p. 39 (1820); Vicill. Enc. Méth. iii. p. 1387 (1823); Voigt, Cuv. Uebers. p. 735 (1831); Finsch, Papag. ii. p. 908 (1868).

Red-winged Parrakeet, Lath. Gen. Hist. ii. p. 171 (1822).

Lorius incarnatus, Steph. Gen. Zool. xiv. 2, p. 132 (1826).

Palæornis incarnatus, Wagl. Mon. Psitt. p. 517 (1832); G. R. Gr. List Psitt. Brit. Mus. p. 22 (?) (1859); id. Hand-list, ii. p. 143, n. 8062 (1870).

"The bill is formed much like those in the other Parrots, and of a light flesh-colour; the iris of the eye is of a very dark hazel-colour, so that it appears almost black; . . . the eye is placed in a plat of bare skin of a whitish colour. Immediately beneath the bill it bath a little spot of fine red or scarlet feathers; the remainder of the head and neck is of a full grass-green colour, as are the back, rump, and tail; the greater quills are of a dark green colour; all the covert-feathers of the wings are of a reddish colour, except the smaller feathers round the ridges of the wings, which are green; the breast, belly, thighs, and covert-feathers beneath the tail are of a lighter green, and more inclining to yellow than those on the upper side of the bird; the legs and feet are of a light flesh-colour; the toes are disposed as in other Parrots" (Edwards). Dimensions (taken from Edwards' figure): total length 7½ inches, wing 2.9, middle tail-feathers 4, outer tail-feathers 1½, culmen 0.5 (Finsch).

Hab. Unknown.

Edwards mentions two specimens of this bird, one of which was said to be from East Indies. Wagler thought that it might belong to the genus Sittace, and compares it with Sittace tirica. Dr. Finsch thinks that it is probably a Brotogcrys, having the naked circle round the eyes; he finds that it has a great resemblance to B. tuipara.

## 5. Psittacus parvus.

Psittacus parvus, Bontius, Hist. Nat. et Med. Ind. Orient. p. 631, with fig.; Finsch, Papag. ii. p. 909 (1868).

Psittacus parvus Bontii, Willughb. Orn. p. 81.

Psittaca javensis cristata coccinea, Briss. Orn. iv. p. 381 (1760).

Perruche huppée, Buff. Hist. Nat. Ois. vi. p. 160 (1779).

Crested Red-Parrakeet, Lath. Syn. i. p. 233, n. 25 (1781); id. Gen. Hist. ii. p. 141 (1822).

Psittaeus javanieus, Gm. (nec auct.) S. N. i. p. 319, n. 64 (1788); Bechst.

Kurze Üeb. p. 71 (1811–12).

Psittacus bontii, Lath. Ind. Orn. i. p. 92, n. 29 (1790); Shaw, Gen. Zool. viii. 2, p. 453 (1811); Vieill. N. D. xxv. p. 349 (1817); id. Enc. Méth. iii. p. 1388 (1823).

Scarlet; throat grey; fore neck and breast rose-colour; wings and scapulars varied with green; the outer tail-feathers rose-coloured, with blue tips; bill and legs grey; tail very long. Size of a Lark.

Hab. Java.

Both Wagler and G. R. Gray identify this bird with Charmosyna papuensis!

#### 6. Psittacus formosus.

Psittacus formosus, Scop. Annus I. Hist. Nat. p. 30 (1769); Finsch, Papaq. ii. p 910 (1868).

Green-yellow; forehead blue, shoulders red; size of Columba domestica; breast and abdomen with narrow dark cross lines; the feathers of the legs (?) yellow at the tip; two middle tail-feathers entirely red; hind neck red. Hab. ---?

#### 7. PSITTACUS JAPONICUS.

Psittacus erythrochlorus macrourus, Aldrov. Orn. i. p. 678, icon. p. 681.

Psittaca japonensis, Briss. Orn. iv. p. 362 (1760). Psittacus japonicus, Linn. S. N. i. p. 141, n. 8 (1766); Gm. S. N. i. p. 315 n. 8 (1788); Lath. Ind. Orn. i. p. 86, n. 12 (1790); Shaw, Gen. Zool. viii. 2, p. 417 (1811); Bechst. Kurze Ueb. p. 67 (1811-12); Vieill. N. D. xxv. p. 359 (1817); Kuhl, Consp. Psitt. p. 97 (1820); Vieill. Enc. Meth. iii. p. 1394 (1823); Finsch, Papag. ii. p. 910 (1868).

Perruche verte et rouge, Buff. Hist. Nat. Ois. vi. p. 159 (1779).

Japanese Parrot, Lath. Syn. i. p. 209, n. 12 (1781); id. Gen. Hist. ii. p. 114 (1822).

Both Wagler and G. R. Gray identify the bird described by Aldrovandus with Charmosyna papuensis.

#### 8. PSITTACUS PALLIDUS.

Psittacus pallidus, Shaw, Nat. Misc. pl. 258 (-?); Lath. Syn. Suppl. ii. p. 84 (1802); Shaw, Gen. Zool. viii. 2, p. 471 (1811); Vieill. N. D. xxv. p. 374 (1817); id. Enc. Méth. iii. p. 912 (1823); Wagl. Mon. Psitt. p. 742 (av. dub.) (1832); Finsch, Papag. ii. p. 912 (1868). Pale Parrakeet, Lath. Gen. Hist. ii. p. 145 (1822).

"Yellow Parrakeet, with whitish wings slightly tinetured with rose-colour and with a cast of greenish according to the direction of the light. Length about 6 inches." (Shaw.)

Hab. New Holland?

This is, according to Dr. Finsch, an albino of a species belonging to the genus Euphema.

#### 9. Psittacus nigricollis.

Psittaeus nigricollis, Lath. Syn. Suppl. ii. p. xxii, n. 8 (1802); Shaw, Gen. Zool. viii. 2, p. 443 (1811); Vieill. N. D. xxv. p. 363 (1817); Kuhl, Consp. Psitt. p. 94 (1820); Vieill. Enc. Méth. iii. p. 1397 (1823); Wagl. Mon. Psitt. p. 743 (1832); Finsch, Papag. ii. p. 912 (1868).
Black-necked Parrakeet, Lath. Syn. Suppl. ii. p. 90, n. 17 (1802); id. Gen.

Hist. ii. p. 158 (1822).

Size of Palæornis alexandri, but with shorter tail; bill black; general colour

green; forehead and region round the eyes lemon-yellow; throat, breast, wings, and tail black; lores and a line on each side of the neck white; small wing-coverts blue; tail cuneated; tail-feathers externally washed with green.

Hab. Brazil?

Dr. Finsch thinks this is an artificial specimen.

#### 10. Psittacus verticalis.

Psittacus verticalis, Lath. Syn. Suppl. ii. p. xxii, n. 9 (1802); Shaw, Gen.
Zool. viii. 2, p. 418 (1811); Vieill. N. D. xxv. p. 359 (1817); Kuhl,
Consp. Psitt. p. 100 (1820); Vieill. Enc. Méth. iii. p. 1394 (1823); Wagl. Mon. Psitt. p. 741 (av. dub.) (1832); Finsch, Papag. ii. p. 913 (1868). Red-topped Parrot, Lath. Syn. Suppl. ii. p. 369 (1802); id. Gen. Hist. ii.

p. 182 (1822).

Green, with the middle of the crown red; quills blue; bill large, blue, with a black tip. Length 18 inches.

Hab. New Holland.

Dr. Latham notices that this bird is most allied to the Pacific Parrakeet, but seems to be nearly twice the size.

### Rose-fronted Parrot.

Rose-fronted Parrot, Lath. Gen. Hist. ii. p. 186 (1822); Finseh, Papag. ii. p. 913 (1868).

"Length eight inches and a half. Bill dusky pale flesh-colour; forehead and round the bill above obscure rosy buff; cheeks and chin dusky pale green; plumage above full green, beneath yellow-green; rump and under wing-coverts blue-green; quills dusky, edged outwardly with green; tail cuneiform, the two middle feathers nearly five inches long, and project one inch and three quarters beyond the adjoining ones, which are two inches and three quarters long, the rest graduate in proportion to the outmost, which is only one inch and a half; the two middle are chiefly blue, with pale tips, the others green, the inner webs more or less yellow; quills long, and reach to where the two middle feathers extend beyond the others; legs brown, claws pale." (Latham.)

Probably a young bird

## 12. CRIMSON-CROWNED PARRAKEET.

Crimson-crowned Parrakeet, Shaw, Gen. Zool. viii. 2, p. 419 (1811); ? Lath. Gen. Hist. ii. p. 184 (1822).

"Size of Tabuan Parrakeet, to which it seems extremely allied; colour similar, except that the crown of the head alone is of a rich scarlet; across the shoulders a pale green bar, as in the Tabuan; rump blue." (Shaw.)

Hab. New Holland.

Shaw's description seems to apply to a specimen of Aprosmictus cyanopygius (Vieill.); Latham's description differs somewhat, and cannot be well identified.

#### 13. CHLOROTIC PARROT.

Chlorotic Parrot, Lath. Gen. Hist. ii. p. 144 (1822); Finsch, Papag. ii. p. 914 (1868).

"Length fourteen inches or more. Bill pale; irides hazel; plumage on the head, upper parts of the body, wings, and tail pale greenish yellow, shafts of the feathers white; throat and breast pale red, growing deeper on the belly and vent, so as to appear quite red, but the feathers of the last margined with dull yellow at the ends, appearing like crescents, rump tinged with red; tail cunciform, greenish yellow, with a light tinge of scarlet at the end; legs black." (Latham.)

According to Dr. Finsch, perhaps a variety of some species of the genus Platycercus.

#### 14. CRIMSON AND YELLOW PARROT.

Orimson and Yellow Parrot, Lath. Gen. Hist. ii. p. 143 (1822); Finsch, Papag. ii. p. 914 (1868).

"Leugth nineteen inches. Bill deep orange, margined with black; under mandible black; head, neck, and underparts fine crimson; quills white; vent buff-yellow, the feathers margined with crimson; tail cuneiform, pale yellow.' (Latham.)

According to Dr. Finsch, a variety of a species of the genus Platycercus.

### 15. JAY-WINGED LORY.

Jay-winged Lory, Lath. Gen. Hist. ii. p. 130 (1822); Finsch, Papag. ii. p. 915 (1868).

Most likely, according to Dr. Finsch, an artificial specimen of a red Lory with feathers of a Jay.

### 16. PSITTACUS CAPITATUS.

Lori Perruche de la Mer du Sud, Virey in Sonn. édit. Buff. Psittacus capitatus, Shaw, Gen. Zool. viii. 2, p. 466 (1811); Kuhl, Consp. Psitt. p. 100 (1820).

Red-hooded Parrakeet, Lath. Gen. Hist. ii. p. 136 (1822); Finsch, Papag. ii. p. 915 (1868).

Yellow-olive, with red head and breast and blue quills and tail-feathers; bill and legs grey. Length between 7 and 8 inches. Hab. Southern Islands.

### 17. PAPUAN LORY, var.

Papuan Lory, var. D, Lath. Gen. Hist. ii. p. 126 (1822); Finsch, Papag. ii. p. 915 (1868).

Red; pileum blue; the middle of the back yellowish; before the thigh yellow; the abdomen blue; the upper and the under tail-coverts red; tail green, with the apical part 2 inches wide, yellowish; bill red; feet dark grey. Total length 9 inches; tail cuneated.

According to Dr. Finsch, not a variety of Charmosyna papuensis.

#### 18. PSITTACUS BUCCALIS.

La Perruche à joues grises, Levaill. Perr. i. p. 188, pl. 67 (1801).

Psittacus buccalis, Bechst. Kurze Ueb. p. 83, pl. 10 (ex Levaill.) (1811–12); Kuhl, Consp. Psitt. p. 26 (1820); Finsch, Papag. ii. p. 916 (1868). Psittacus cinereicollis, Vieill. N. D. xxv. p. 365 (ex Levaill.) (1817); id.

Enc. Méth. iii. p. 1399 (1823). Aratinga buccalis, Steph. Gen. Zool. xiv. p. 139 (1826).

Sittace murina, junior, Wagl. Mon. Psitt. p. 639 (1832).

Wagler, Gray, and Reichenow agree in considering the bird described and figured by Levaillant as the young of Myopsittacus monachus. Dr. Finsch thinks that it cannot be identified.

## 19. PSITTACUS, Sp.

Psittacus cornutus, Bechst. (nec Gm.) Kurze Uebers. p. 78 (Anmerkung) (1811-12); Finsch, Papag. ii. p. 917 (1868).

Forehead and margin of the blue cheeks red; head yellow, mixed with red and green; hind neck dark green, mixed with yellow; edge of the sca608

pulars and some of the under wing-coverts blue, the other wing-coverts brownish with dark green edges; uropygium (?) golden green; throat blue; the rest of the underparts yellow; outer quills ash-grey, tinged with dark blue; the long graduated tail ashy grey at the base, the feathers edged with blue on the outer web, and turning to whitish towards the tips; bill strong, with a short hook, dark at the base, pale at the tip.

Perhaps a Platycercus.

### 20. Pyrrhura Chiripepe.

Chiripepé, Azara, Apunt, Hist. Nat. Parag. i. p. 429, n. 281 (1803); id. Voy. (ed. Sonn.) iii. p. 65 (1809); Berl. Journ. f. Orn. 1887, p. 25.
Psittacus chiripepe, Vieill. N. D. xxv. p. 361 (1817); id. Enc. Méth. iii. p. 1396 (1823); Finsch. Papag. ii. 2, p. 917 (1868).
Chiripepé Parrakeet, Lath. Gen. Hist. ii. p. 191 (1832).
Sittace chiripepe, Wagl. Mon. Psitt. p. 644 (1832).
Conurus chiripepe, G. R. Gr. Gen. B. ii. p. 413, n. 20 (1845); Hartl. Ind. Azar. Apunt. p. 18 (1847); G. R. Gr. List Psitt. Brit. Mus. p. 42 (1859) (1859).

Microsittace cheripepe, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 55.

Pyrrhura chiripepe, Bp. Naumannia, 1856, Consp. Psitt. n. 45; G. R. Gr. Hand-list, ii. p. 149, n. 8142 (1870).
Conurus vittatus, Berl. (nec Shaw) Journ. f. Orn. 1887, pp. 25, 121 (Paraguay).

Green; throat, neck, ears, and lower abdomen carmine-brown; on the lower breast a red spot, and another on the abdomen; tail red on the upper surface, mixed with yellow; on the forehead a narrow brown band; the wing outside blue; bill and feet blackish; the skin round the eyes whitish. Total length 93", tail 41", tarsus 8"".

Hab. Paraguay.

D'Azara's description is incomplete and obscure.

According to Graf v. Berlepsch, the Paraguayan bird is very likely different from the Brazilian Pyrrhura vittata (Shaw).

#### 21. Pyrrhura beryllina.

Pyrrhura beryllina, Mass. et Souancé, fide Bp. Naumannia, 1856, Consp. Psitt. n. 37 (descr. nulla); Finsch, Papag. ii. 2. p. 919 (1868); G. R. Gr. Hand-list, ii. p. 149, n. 8138 (1870).

Conurus beryllinus, G. R. Gr. List Psitt. Brit. Mus. p. 40 (1859).

It seems that Massena and Souance never mentioned a Parrot under the above name, and no description of it has been given either by Bonaparte or anybody else.

#### 22. Conurus flaviventris,

Maracana cabeza y encuentro roxos, Azara, Apunt. Hist. Nat. Parag. i. p. 418, n. 276 (1803).

Maracana à tête et pli de l'aile rouges, Azara, Voy. (ed. Sonn.) iii. p. 59 (1809).

Sittace flaviventris, Wagl. Mon. Psitt. p. 658 (1832) (ex Azara); Gieb. Thes. Orn. iii. p. 495 (1877).

Psittacara flaviventris, Bp. Rev. et Mag. de Zool. 1854, p. 150, n. 23. Conurus flaviventris, G. R. Gr. Gen. B. ii. p. 413, n. 6 (1845); Haytl. Ind. Azara Apunt. p. 17 (1847); G. R. Gr. List Psitt. Brit. Mus. p. 32 (1859); Finsch, Papag. ii. p. 918 (1868); G. R. Gr. Hand-list, ii. p. 146, n. 8096 (1870).

Green; abdomen yellow; forehead to the middle of the head, a spot on the small wing-coverts, the bend and the edge of the wing bright red; rest of the wing-coverts green; the quills above green, for the greater part violet, underAPPENDIX. 609

neath malachite-green: naked skin round the eyes bluish white; feet grey; irides yellow. Size of C. pavua. Total length from the tip of the bill to the base of the tail 6", tibia 24". (From Azara.)

Hab. Paraguay.

Perhaps, according to Dr. Finsch, a variety of C. pavua; it seems allied to C. frontatus, Cab.

## 23. Brotogerys (?) sosove.

Petite Perrnche de Cayenne, D'Aubent. Pl. Enl. 456. f. 2.

Psittacus cajenneus, Müll. S. N. Suppl. p. 81 (nec p. 78) (1776); Cass. Pr. Acad. Philad. 1864, p. 241.
Le Sosové, Buff. Hist. Nat. Ois. vi. p. 280 (1779).

Cayenne Parrakeet, Lath. Gen. Syn. i. p. 320, n. 130 (1781); id. Gen. Hist. ii. p. 260 (1822).

Psittacus notatus, Bodd. (nec Müll.) Tabl. Pl. Enl. p. 27 (1783) (ex Pl.

Enl. 456. f. 2).

Psittacus sosove, Gm. S. N. i. p. 352, n. 138 (1788); Lath. Ind. Orn. i. Psitacus sosove, Cm. S. N. I. p. 592, n. 150 (1185); Lath. Ind. Orn. I. p. 134, n. 159 (1790); Shaw, Gen. Zool. viii. 2, p. 552 (1811); Bechst. Kurze Ueb. p. 86 (1811–12); Vivill. N. D. xxv. p. 380 (1817); id. Enc. Meth. iii. p. 1410, pl. 130. f. 7 (1823); Wagl. Mon. Psitt. p. 634 (1832). Aratinga sosove, part., Steph. Gen. Zool. xiv. p. 136 (1826). Conurus tuipara, var. notatus, G. R. Gr. List Psitt. Brit. Mus. p. 46

(1859).

Brotogerys tuipara, var., Finsch, Papag. ii. p. 105 (1868).

Brotogerys tuipara, var. cayenneus, G. R. Gr. Hand-list, ii. p. 150 (1870).

Green; primary-coverts and upper tail-coverts yellow. Size of Brotogerys tui (Gm.).

Hab. Cayenne (?).

Obs. D'Aubenton figured and Buffon described this bird, which the latter said was common in Cayenne, especially towards the Oyapok, and on the Amazons; as it has not again been found, it must remain a doubtful species.

## 24. PSITTACUS PEREGRINUS.

Peregrine Parrakeet, Lath. Syn. Suppl. ii. p. 62 (1802); id. Gen. Hist. ii.

p. 193 (1822).

Psittacus peregrinus, Lath. Ind. Orn. i. p. 105, n. 67 (1790); Shaw, Gen. Zool. viii. 2, p. 469 (1811); Beckst. Kurze Uebers. p. 80 (1811); Vieill. N. D. xxv. p. 355 (1817); Kuhl, Consp. Psitt. p. 100 (1820); Vieill. Enc. Méth. iii. p. 1392 (1823); Wagl. Mon. Psitt. p. 741 (1832) (av. dub.); Finsch, Papag. ii. p. 869 (1868).

Trichoglossus peregrinus, G. R. Gr. Cat. B. Trop. Isl. p. 33 (1859); id.

Fand-list, ii. p. 156, n. 8231 (1870).

"Size rather bigger than the Guinea Parrakeet. Length 8 inches. Bill red; general colour of the plumage green, beneath inclining to yellow; the middle of the wing-coverts pale brown, appearing as a broad band down the wing; tail short, cuneiform; legs of a pale red." (Latham.)

Hab. South Sea Islands.

It has been supposed that this bird is the young of Psittacus palmarum, Gm.

### 25. PSITTACUS LINEATUS.

Psittacus lineatus, Linn. S. N. iii. App. p. 223 (1767); Gm. S. N. i. p. 329, n. 48 (1788); Lath. Ind. Orn. i. p. 104, n. 64 (1790); Shaw, Gen. Zool. viii. 2, p. 459 (1811); Beehst. Kurze Ueb. p. 29 (1811); Kuhl, Consp. Psitt. p. 101 (1820); Wagl. Mon. Psitt. p. 744 (1832) (av. dub.); Finsch, Papag. ii. 869 (1868).

Lineated Parrakeet, Lath. Syn. i. p. 252 (1781); id. Gen. Hist. ii. p. 178 (1822).

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Size of a Dove. General colour green, but yellower beneath; the quills are own beneath, with the inner margins very pale, which gives the appearance of the wing being longitudinally striped with pale lines; tail cuneiform, a little longer than the body.

Hab. Uncertain.

It has been supposed that the above description applies to *Psittacus pal-marum*, Gm., but the dimensions do not agree.

#### 26. CHARMOSYNA SAMOENSIS.

Charmosyna samoensis, Hartl. Orn. Centr.-Polyn., Einleit. p. xxi (1867); Finsch, Papag. ii. p. 233 (1868).

Size of a Sparrow; red and green, with the tail four times as long as the body, red.

Hab. Olajava (=Samoa).

Described by Kotzebue, Neue Reise um die Welt, 1823-26, i. p. 154 (1830).

### 27. Trichoglossus, sp.

Trichoglossus (Lorius?), sp. inc., Layard, Ibis, 1878, pp. 274, 280 (Santo).

"With a red breast, and about the size of Lorius solitarius of Fiji" (Layard). Hab. Santo, New Hebrides.

## B. Short-tailed Species.

#### STAVORINUS.

Type.

#### 28. STAVORINUS PARAGUANUS.

Paragua, Maregr. Hist. Bras. ix. p. 207 (1648); Buff. Hist. Nat. Ois. vi. p. 248 (1779); Licht. Abh. k. Ak. Wiss. Berl. 1816-17, p. 167.

Lorius brasiliensis, Briss. Orn. iv. p. 229 (1760).

Paraguan Lory, Lath. Syn. i. p. 277, n. 83 (1781); id. Gen. Hist. ii.

p. 232 (1822).

Psittacus paraguanus, Gm. S. N. i. p. 336, n. 104 (1788); Lath. Ind. Orn.
i. p. 117, n. 105 (1790); Shaw, Gev. Zool. viii. 2, p. 532 (1811); Bechst.
Lath. Ueb. p. 94 (1811-12); Vieill. N. D. xxv. p. 313 (1817); Kuhl,
Consp. Psitt. p. 95 (1820); Vieill. Ene. Méth. iii. p. 1366 (1823); Desm.
Diet. Se. Nat. xxxix. p. 128 (1826); Hahn, Orn. Atl., Papag. p. 93, t. 72 (1840); Finsch, Papag. ii. p. 920 (1868).

(1840); Finseh, Papag. ii. p. 920 (1868). Psittacodis paragua, Wagl. Mon. Psitt. p. 574 (syn. emend.), t. xxiii. (1832). Eclectus paragua, G. R. Gr. Gen. B. ii. p. 418, n. 3 (syn. emend.) (1845). Eclectus paraguanus, part., G. R. Gr. List Psitt. Brit. Mus. p. 67 (1859).

Stavorinius paragua, Bp. Consp. Av. i. p. 4 (syn. emend.) (1850).

Stavorinus paragua, Bp. Rev. et Mag. de Zool. 1854, p. 155, n. 247; id. Naumannia, 1856, Consp. Psitt. n. 259 (partim?).
Psittacodis stavorinus, part., G. R. Gr. Hand-list, ii. p. 154, n. 8197

Psittacodis stavorinus, part., G. R. Gr. Hand-list, ii. p. 154, n. 8197 (1870).

Shining black; middle of the back, breast, abdomen, and lower tail-coverts red; some of the tibial feathers yellowish: bill blackish; feet white-grey; round the eyes red; iris grey-brown. Size of *Eeleetus grandis*.

Hab. Brazil!

This bird has much the appearance of Dasyptilus pesqueti (Less.).

#### 29. Psittacus guineensis.

Yellow-breasted Lory, Lath. Syn. i. p. 276, n. 82 (1781) (ex Miller); id. Gen. Hist. ii. p. 231 (1822).

Psittacus guineensis, Mill. Illustr. t. xxix. (17—?); Gm. S. N. i. p. 336,
n. 103 (1788); Lath. Ind. Orn. i. p. 116, n. 104 (1790); Shaw, Gen.
Zool. viii. 2, p. 541 (1811); Bechst. Kurze Ueb. p. 94 (1811–12); Vieill.
N. D. xxv. p. 312 (1817); Kuhl, Consp. Psitt. p. 97 (1820); Wagl.
Mon. Psitt. p. 611 (1832); Finsch, Papag. ii. p. 921 (1868).
Psittacus guianensis (err.), Vieill. Enc. Méth. iii. p. 1366 (1823).

"Bill black; cere white; throat and round the eye the same; above the eye a patch of yellow; rest of the head and neck crimson; the breast is yellow; wing-coverts green (edged with yellow); quills blue, edged with yellow; under the wings, belly, thighs, vent, and underpart of the tail white; the tips of the last red; legs dusky; claws black." (Latham.)
"Inhabits Guinea." (Miller.)

Most likely an artificial bird.

#### 30. PSITTACUS MEXICANUS.

Avis de coco, Psittaci species Mexicana vario colore, Seba, Thes. i. p. 94, t. lix. f. 2 (1734).

Psittacula Mexicana cristata, Briss. Orn. iv. p. 405 (1760); Gerini, Orn. ii. t. exxxi. (1769).

Crested Mexican Parrot, Lath. Syn. i. p. 322, n. 133 (1781); id. Gen. Hist. ii. p. 278 (1822).

Psittacus mexicanus, Gm. S. N. i. p. 352, n. 141 (1788); Lath. Ind. Orn.
i. p. 135, n. 162 (1790); Bechst. Kurze Ueb. p. 86; Kuhl, Consp. Psitt.
p. 97 (av. dub.) (1820); Finsch, Papag. ii. p. 922 (1868).

Although Dr. Finsch declares that it is very doubtful if this is a Parrot at all, I should say, after having inspected Gerini's plate, that it is certainly a made-up bird, most likely a Cockatoo, artificially coloured.

#### 31. Psittacus erythrochlorus.

Psittacus erythrochlorus cristatus, Aldrov. Orn. i. p. 682 (with fig.).

Psittacula cristata, Briss. Orn. iv. p. 404 (1760).

Crested red and green Parrakeet, Lath. Syn. i. p. 321, n. 132 (1781); id. Gen. Hist, ii. p. 277 (1822).

Orn. i. p. 134, n. 161 (1790); Shaw, Gen. Zool. viii. 2, p. 551 (1811); Beehst. Kurze Ueb. p. 86 (1811-12); Finseh, Papag. ii. p. 922 (1868).

Green; wings, tail, and crest red; tail short. Size of a Blackbird. A fabulous bird.

#### 32. Psittacus cæruleocephalus.

Psittacus versicolor seu erythrocyanus, Aldrov. Orn. i. p. 675. ? Psittacus violaceus, Barr. Orn. Class. iii. Gen. ii. sp. 10. Psittacus Guianensis caruleus, Briss. Orn. iv. p. 304 (1760).

Psittacus caruleocephalus, Linn. S. N. i. p. 143, n. 28 (1766); Gm. S. N i. p. 336, n. 28 (1788); Lath. Ind. Orn. i. p. 117, n. 106 (1790); Bechst. Kurze Ueb. p. 94 (1811–12); Vieill. N. D. xxv. p. 326 (1817); id. Enc. Méth. iii. p. 1373, pl. 226 f. l (1823); Finsch, Papag. ii. p. 924 (1868). Le Crick rouge et bleue, Buff. Hist. Ois. vi. p. 226 (1779).

Red and blue Parrot, Lath. Syn. i. p. 277, n. 84 (1781); id. Gen. Hist. ii. p. 232, with var. A (?) (1822).

Head, neck, and breast blue; in the middle of the crown a yellow spot; back blue; lower back and sides yellow; abdomen, upper and under tailcoverts green; wing-coverts green, mixed with yellow and rose-colour; quills and tail rose-colour. Total length 9 inches.

A bird mentioned by Aldrovandus, but quite unknown to more modern

naturalists.

#### 33. PSITTACUS UNICOLOR.

Le Perroquet Lori unicolor, Levaill. Perr. ii. p. 131, pl. 125 (1805).

Le Perroquet Lori unicolor, Leviaul. Perr. ii. p. 131, pl. 125 (1803).

Psittacus unicolor, Shaw, Gen. Zool. viii. 2, p. 538 (1811) (ex Levaillant);

Bechst. Kurze Ueb. p. 93, pl. 15 (1811-12); Vieill. N. D. xxv. p. 338 (1817); Kuhl, Consp. Psitt. p. 39 (1820); Vieill. Enc. Meth. iii. p. 1381 (1823); Cuv. Règn. An. i. p. 465 (1829); Voigt, Cuv. Uebers. p. 744 (1831); Wagl. Mon. Psitt. p. 745 (av. dub.) (1832); Finsch, Papag. ii. p. 924 (1868); Salvad. Orn. Pap. e Mol. i. p. 268 (1880).

Unicolor Lory, Lath. Gen. Hist. ii. p. 227 (1822).

Lories unicolor Steph. Gen. Zool. vii. p. 132 (1826).

Lorius unicolor, Steph. Gen. Zool. xiv. p. 132 (1826).
Eos unicolor, G. R. Gr. Gen. B. App. p. 20 (1849); id. List Psitt. Brit. Mus. p. 52 (1859); id. Hand-list, ii. p. 154, n. 8204 (1870).
Lorius ruber (part.), Schleg. Mus. P.-B. Psittaci, p. 123 (1864).

Entirely red; even the bill is red. Size of Lorius garrulus.

Hab. Moluccas (?).

Very likely a variety of E. rubra.

#### 34. PSITTACUS CERVICALIS.

Red-naped Parrakeet, Lath. Syn. Suppl. i. p. 66 (1787); id. Gen. Hist. ii.

p. 264 (1822).

Psittacus cervicalis, Lath. Ind. Orn. i. p. 130, n. 145 (1790); Bechst. Kurze Ueb. p. 82 (1811–12); Vieill. N. D. xxv. p. 377 (1817); Kuhl, Consp. Psitt. p. 93 (1820); Vieill. Enc. Meth. iii. p. 1408 (1823); Finsch, Papag. ii. p. 925 (1868).

Le Perroquet Langlois, Levaill. Perr. ii. p. 161. pl. 136 (1805).

Psittacus nuchalis, Shaw, Nat. Misc. xxi. pl. 913 (1789-1813) (ex Levaillant); id. Gen. Hist. viii. 2, p. 543 (1811).

Psittacus erythrothorax, Bechst. Kurze Ueb. p. 102, pl. 19 (ex Levaillant) (1811-12).

Psittacus Langloisi, Vieill. N. D. xxv. p. 312 (1817); id. Enc. Méth. iii. p. 1366 (1823).

Eos cervicalis (part.), Wagl. Mon. Psitt. p. 561 (1832); G. R. Gr. Gen. E.

ii. p. 417, n. 7 (partim) (1845).

Trichoglossus eervicalis, *Bp. P. Z. S.* 1850, p. 27; *G. R. Gr. List Psitt. Brit. Mus.* p. 62 (syn. emend.) (1859); *id. Hand-list*, ii. p. 156, n. 8223 (1870).

Green; forehead, a band on the nape, lower throat, and breast red. Total length 8 inches.

Dr. Finsch suspects that this is an artificial bird; but it must be remembered that the bird was known to Latham long before Levaillant.

## 35. PSITTACES DUBIUS.

Dubious Parrot, Lath. Syn. Suppl. i. p. 62 (1787); id. Gen. Hist. ii. p. 158

Psittaeus dubius, Lath. Ind. Orn. i. p. 97, n. 44 (1790); Shaw, Gen. Zool. viii. 2, p. 465 (1811); Bechst. Kurze Ueb. p. 94 (1811-12); Vieill. N. D. xxv. p. 374 (1817); Kuhl, Consp. Psitt. p. 101 (1820); Vieill. Enc. Méth. iii. p. 1405 (1823); Wayl. Mon. Psitt. p. 744 (av. dub.) (1832); Finsch, Papag. ii. p. 926 (1868).

"Bill and legs pale horn-colour, from the base to the eye and round the last bare and of the same colour; head and chin green; the whole neck pale rufous; upper parts of the body and wings green; underparts the same, but paler; the outer edge of the bastard-wing and quills blue; tail cuneiform, but short, the colour a yellowish green; the four middle feathers blue at the ends, where they are pointed in shape; the four outer ones on each side tipped with brown." (Latham.)

Hab. Uncertain.

Latham's description was taken from a specimen in the British Museum.

#### 36. PSITTACULA PICTA.

Leona Parrakeet, Lath. Gen. Hist. ii. p. 263 (1822).
Poliopsitta picta, Hartl. MS. ?; Bp. Naumannia, 1856, Consp. Psitt. n. 227; G. R. Gr. Hand-list, ii. p. 161, n. 8371 (1870).
Agapornis picta, Hartl. Syst. Orn. West-Afr. p. 169 (1857); id. Journ. f. Orn. 1861, p. 262; id. Ibis, 1879, p. 85.
Psittacula picta, G. R. Gr. List. Psitt. Brit. Mus. p. 90 (1859); Finsch, Pagaga, ii. p. 262 (1868).

Papag. ii. p. 926 (1868).

A doubtful species, perhaps referable to Agapornis swindereniana.

#### 37. CRIMSON-BANDED PARROT.

Crimson-banded Parrot, Lath. Gen. Hist. ii. p. 254 (1822); Finsch, Papag. ii. p. 927 (1868).

"Length 8 inches. Bill pale red; plumage chiefly olive or yellow-green; forehead crimson, passing on each side and surrounding the eye; below on the ears a crimson spot; edge of the wing within crimson; the outer as far as the middle the same, but broader, occupying one-third of the breadth of the wing; greater quills deep violet-purple, margined outwardly with green; tail rounded, olive-green; above the knees a mixture of crimson, as a garter; legs brownish flesh-colour." (Latham.)

Hab. Unknown.

Described from a drawing by a Mr. Woodford.

#### 38. Blue-faced Parrakeet.

Blue-faced Parrakeet, Lath. Gen. Hist. ii. p. 271 (1822); Finsch, Papag. ii. p. 928 (1868).

"Length 5 inches, Bill and legs pale red; plumage green; face, including the eyes and chin, pale blue; beneath this the throat is crimson-red; greater quills pale blue; secondaries the same, but crimson more than halfway from the base, forming a spot on the wing; tail green, a little rounded, the end for more than one-third yellow.

"A second specimen had the whole face, chin, and throat blue; under the eye, on each jaw, a pale blue patch; wings and tail as in the other, but the yellow at the end of the latter occupies less space, and the interior webs of

some of the inner feathers are pale blue.

"In a third the whole front is crimson; nape and neck behind pale blue; the patch on the jaws red; tail wholly green, the end not yellow." (Latham.) Hab. Unknown.

Described from a drawing by a Mr. Woodford.

### 39. Blue-backed Parrot.

Blue-backed Parrot, Lath. Gen. Hist. ii. p. 272 (1822); Finsch, Papag. ii. p. 928 (1868).

"Length 5 inches. Bill pale; plumage green; the greater wing-coverts deep blue, forming an oblique large spot on the wing; the lower half of the back, for an inch or more, deep blue; several of the middle feathers margined with orange; feathers of the rump dusky, with green margins; upper tail-coverts orange; legs dusky." (Latham.)

"It seems to approach in general marking to the Passerine." (Latham.)

#### 40. SHORT-TAILED PARRAKEET.

Short-tailed Parrakeet, Lath. Gen. Hist. ii. p. 274 (1822); Finsch, Papag. ii. p. 929 (1868).

"Length to the rump 4 inches; bill \(^3\) of an inch. The colour of dirty box; the upper mandible more straight than usual in the genus, clongated at the point, but very little bent, the under reaching to about half the length; plumage in general fine light grass-green, inclining to brown on the wing-coverts; rump dusky crimson; tail scarcely half an inch long; from the base to the middle blue, the rest white; legs pale brown." (Latham.)

Hab. Unknown.

Described from a drawing by a Mr. Woodford.

#### 41. Chrysotis chloris.

Neuer Amazonen-Papagei, Sacc. in Weinland's Zoolog. Garten, 1864, p. 21; Finsch, Papag. ii. p. 390 (1868). Chrysotis chloris, Finsch, ibid.

Size of a Fowl. Green, above darker; below more yellow; the inner series of the marginal wing-coverts red; tail-feathers green at the base, with a large red spot in the middle, at the end yellow-green; bill white at the base, black at the tip.

Not sufficiently described.

#### 42. PSITTACUS GERINI.

Psittacus Brasiliensis viridis capite albo, Gerini, Orn. i. p. 95, t. cix. (1767). Psittacus gerini, Lath. Ind. Orn. i. p. 119, n. 112 (1790); Bechst. Kurze Ueb. p. 96 (1811-12); Vicill. N. D. xxv. p. 311 (1817); Kuhl, Consp. Psitt. p. 95 (1820); Vicill. Enc. Meth. iii. p. 1365 (1823); Finsch, Papag. ii. p. 518 (1868).

Gerini's Parrot, Lath. Syn. Suppl. ii. p. 93, n. 23 (1802); id. Gen. Hist. ii. p. 236 (1822).

Psittacus leucocephalus, var. & Wagl. Mon. Psitt. p. 600 (1832); Hahn,

Orn. Atl., Papag. p. 76 (1836).

Green, the feathers edged with blackish; head entirely white; small wing-

coverts, some of the primaries, and the base of the tail red.

The bird figured by Gerini, according to Dr. Finsch, is a variety of *Chrysotis* 

collaria, but it appears to me to be quite different.

#### 43. Chrysotis prisca.

Chrysotis priseas, Sclat. P. Z. S. 1861, p. 79. Chrysotis priseus, Albrecht, Journ. f. Orn. 1862, p. 203.

Under the above name Dr. Sclater has designated a certain *Chrysotis*, from which the four species *C. collaria*, *C. leucocephala*, *C. sallei*, and *C. vittata*, inhabiting as many West-Indian Islands, are supposed to have been evolved.

### 44. PSITTACUS CYANOLENUS.

Psittacus cyanolenus, Meyen, Verhandl. der Leop.-Carol. Acad., Suppl. i. 16<sup>te</sup> Bande, p. 95 (1834); Finsch. Papag. ii. p. 930 (1868).

Similar to *P. garrulus*, from which it differs only in having blue wings. Very common in China.

The bird mentioned by Meyen, according to Dr. Finseh, may be Aprosmictus hypophonius or a variety of Lorius garrulus, brought alive to China.

### 45. Psittacus, sp.

Psittacus levaillantii, Rüpp, (nec Kuhl) Neue Wirbelth. p. 63 (1835); id. Reise in Abyssinien, i. p. 399 (1838); Finsch, Papag. ii. p. 931 (1868). Pionus vaillanti?, Rüpp. Syst. Uebers, p. 95 (1845).

Dr. Rüppell says that he once saw in Abyssinia, at an elevation of 12,000 feet, a white Parrot with red wings!

#### 46. Psittacus chloris.

Psittacus chloris, *Lieht. Isis*, 1818, p. 11; *Finsch, Papag.* ii. p. 931 (1868). A name used by Lichtenstein in his 'Preisverzeichniss von Thieren.'

## 47. Parrot, sp.

Grün Papagei mit rothem Kopfe, Heequard, Reise an die Küste n. in das Innere von West-Afr. p. 242 (1854); Finsch, Papag. ii. p. 932 (1868).

#### 48. NOOFFY PARRAKEET.

Nooffy Parrakeet, Lath. Gen. Hist. ii. p. 278 (1822); Finsch, Papag. ii. p. 932 (1868).

Hab. Nooffy, interior of Africa. Only mentioned and not described.

### 49. Parrot, sp.

Little green, yellow-shouldered Parrot, Livingst. Miss. Travels, p. 239 (1857).

Grün Papagei mit gelbem Nacken (!), Finsch, Papag. ii. p. 932 (1868).

Hab. Interior of South Africa (R. Lecambye).

#### 50. Parrot, sp.

Mittelgrosser Papagei grün, mit grosser Hanbe, Heuglin, fide Finsch, Papag. ii. p. 932 (1868).

Hab. Kitsch-Neger Land, interior of Africa.

#### 51. Parrot, sp.

Paleornis?, sp. Heugl., fide Finsch, Papag. ii. p. 933 (1868).

Green; abdomen orange; bill black.

Hab. North-east Africa, along the Bahr-el-Abiad.

Perhaps identical with Paoeephalus senegalus.

#### 52. PSITTACUS TARABE.

Tarabe brasiliensibus, Maregr. Hist. Bras. ix. p. 207 (1648); Lieht. Abh. d. Berl. Akad. 1816-17, p. 168.

Psittacus Brasiliensis erythrocephalos, Briss. Orn. iv. p. 240 (1760).

Tarabé, ou Amazone à tête rouge, Buff. Hist. Nat. Ois. vi. p. 211 (1779).
Red-headed Amazons Parrot, Lath. Syn. i. p. 295 (1781); id. Gen. Hist. ii. p. 250 (1822).

Psittacus taraba, Gm. S. N. i. p. 344, n. 123 (1788).

Psittacus tarabe, Lath. Ind. Orn. i. p. 125, n. 124 (1790); Beckst. Kurze Ueb. p. 97 (1811–12); Vieill. N. D. xxv. p. 321 (1817); Kuhl. Consp. Psitt. p. 96 (1820); Vieill. Enc. Méth. iii. p. 1371 (1823); Finsch, Papag. ii. p. 540 (1868).

Psittacodis tarabe, Wagl. Mon. Psitt. p. 577 (1832).

"Bigger than the Ceram Lory. Bill cinereous; general colour green; head, throat, fore part of the neck, and breast red; lesser wing-coverts the same; legs cinereous; claws black.
"Inbabits Brazil." (Latham.)

### 53. Psittacus leucophthalmus.

Petite Perrnche de l'Isle de Luçon, seconde espèce, Sonn. Voy. à la Nouv. Guin. p. 76, pl. 38 (upper figure) (1776); Wald. Tr. Zool. Soc. ix. p. 137 (1875); Tweedd. Orn. Works, p. 304 (1881).

(1875); Tweeda. Orn. Works, p. 304 (1881).

Psittacus leucophthalmus, Scop. (nec Müll. 1776) Del. Flor. et Faun. Insub. p. 87, n. 25 (1786); Wald. Tr. Zool. Soc. ix. p. 137 (1875); Tweedd. Orn. Works, p. 305 (1881); Ridgw. Pr. U. S. Nat. Mus. x. p. 546 (1887).

Psittacus simplex, Kuhl, Consp. Psitt. p. 66 (ex Sonn.) (1820); Voigt, Cuv. Uebers. p. 747 (1831); Wagl. Mon. Psitt. p. 747 (av. dub.) (1832).

Psittacula leucophthalma, G. R. Gr. Gen. Hist. ii. p. 274 (1822).

Psittacula leucophthalma, G. R. Gr. Gen. B., ii. p. 423, n. 24 (1846); id. List Psitt. Brit. Mus. p. 91 (1859); id. Hand-list, ii. p. 166, n. 8358 (1870).

(1870).

Loriculus (Cyclopsitta) leucophthalmos, v. Mart. Journ. f. Orn. 1866, p. 22.

Psittacula passerina, var., Finsch, Papag. ii. p. 650 (1868).

Dr. O. Finsch has, with some doubt, identified this Parrot with the wellknown South-American Psittacula passerina (Linn.); but there do not appear to be sufficient reasons for this identification.

### 54. PSITTACUS AUREUS.

Le Perroquet d'Or, Levaill. Perr. ii. pl. 138 (1805) (Brazil?).

Psittacus aureus, Shaw, Gen. Zool. viii. 2, p. 543 (1811) (ex Levaillant); Bechst, Kurze Ueb. p. 103, pl. 20 (1811); Kuhl, Consp. Psitt. p. 99 (1820); Wagl. Mon. Psitt. p, 746 (1832) (var. Pioni senegali); Hahn, Orn. Atl., Papag. p. 49, t. 34 (1834); Brehm, Mon. d. Papag. t. 56 (1854) (ex Levaillant).

Poiocephalus aureus, Sw. Class. B. ii. p. 301 (1837).

Mr. G. R. Gray and Dr. Finsch consider the Perroquet d'Or of Levaillant to be a variety of Geoffroyus personatus, while Wagler thought it was a variety of P. senegalus.

#### 55. Parrot, sp.

A third species of the Parrot Family from Norfolk Island, Downing, Proc. Roy. Soc. Tasm. iii. p. 208 (1859); Gray, Ibis, 1862, p. 231.

### 56. Parrot, sp.

G. Forster, in his Account of the Voyage round the World (ii. p. 334), speaks of large and beautiful Parroquets that were found in Tanna; and he further describes them as having a black, red, and yellow plumage. They have not been noticed by any other naturalist (G. R. Gray, Cat. B. Trop. Isl. p. 30 note, 1859; Finsch, Papag. ii. p. 934, 1868).

## ADDENDA.

## Page 36. Add:-

## 4 bis. Lorius salvadorii.

Lorius salvadorii, Meyer, Abh. u. Ber. kyl. Zool. Anthrop. Mus. Dresd. 1890-91, no. 4, p. 6 (1891).

"Lorius L. jobiensi (A. B. M.) simillimus, sed abdomine medio et cervice posteriore obscurioribus, nigro violascentibus, gula, genis, pectore summo et fascia nuchali rubris, tibiis plus minusve viridi intermixtis. Long. tot. 290-300 mm., al. 155-157, caud. 100, rostr. culm. 29-31, tarsi 20." (A. B. Meyer.)

Hab. Astrolabe Bay, N.E. New Guinea.

I am only acquainted with this species from Dr. Meyer's description.

## Page 57. Trichoglossus mitchelli.

Erase lines 13, 14: Psittacus (Trichoglossus) forsteni, Rosenb. &c.

Add: Page 60. Trichoglossus rubritorques.

r. Ad. sk.

Port Darwin.

"Penguin" Coll.

Add: Page 66. Ptilosclera versicolor.

q. ♀ ad. sk.

Port Darwin.

" Peuguin" Coll.

Page 100. Add:-

## 15. Cyclopsittacus amabilis.

Cyclopsittacus amabilis, Rchnw. Journ. f. Orn. 1891, Bericht vii. p. 6.

Very much like *P. nigrifrons*, but smaller, and with the black of the sinciput tinged behind with bluish. Total length 5·11 inches, wing 2·95-3·14, tail 1·37, bill 0·51-0·55, tarsus 0·39-0·43.

Hab. Saparako, Huon Gulf, E. New Guinea.

Add: Page 105. Microglossus aterrimus.

k bis. Ad. sk.

Aru Islands.

Wallace Coll. 2 s

618 ADDENDA.

Add: Page 115. Callocephalon galeatum.

k bis. 3 ad. sk. S. Australia. Salvin-Godman Coll.

Add:— Page 133. Cacatua roseicapilla.

k bis. Ad. sk. Australia. Salvin-Godman Coll.

Add: - Page 195. Conurus cactorum.

g. Ad. sk. Purchased.

## Page 245. Psittacula passerina.

Since the sheet containing the account of *P. passerina* passed through the press, Graf von Berlepsch has kindly sent me for inspection several specimens of that species from the Ceara District and others from Bahia. I have failed to discover the differences mentioned by Mr. Ridgway.

Mr. Salvin informs me that he has now received a specimen of *P. passerina* from Guiana, so that the range of this species is not confined to Brazil.

## Add: Page 311. Chrysotis tucumana.

Adult. Green; edges of the feathers black; upper and under tail-coverts yellow-green; forehead red, with the concealed bases of the feathers yellow; sides of the head with a slight bluish tinge; thighs yellow; primary-coverts red; quills black with the outer web green at the base, blue at the tip; under wing-coverts green, the greater ones and inner web of the quills below verdigris-green; tail green, with the apical portion yellow-green: bill yellow; "iris carmine-red" (Garlepp); feet pale grey (?). Total length about 12.6 inches, wing 8, tail 4.6, bill 0.9, tarsus 0.62. (Mus. Berlepsch.) Hab. Tucuman, also Bolivia (Garlepp).

Through the kindness of Graf von Berlepsch, I have been able to examine two specimens of this scarce and imperfectly known species; both are marked females with a query; in one specimen the red primary-coverts have narrow yellow edges to the outer web. There is no possible doubt as to C. tucumana being quite a distinct species.

species.

## Page 405. Add:---

## 4 bis. Geoffroyus orientalis.

Geoffroyus orientalis, Meyer, Abh. u. Ber. kyl. Zool. Anthrop. Mus. Dresd. 1890-91, no. 4, p.4 (1891).

"Fam. Similis fæminæ G. armensis (Gr.) ab insula Aru, sed capite brunnescenti cæruleo-viridi, subalaribus et axillaribus obscurioribus, elare eyaneis, et macula cubitali pallide badia distinguenda. Long. tot. 230–250 mm., al. 156–168, caud. 75–80, rostri culm. 24–25, tarsi 13–14.

ADDENDA. 619

"Mas. Similis mari G. rhodopsis (Gr.), sed minor, capite minus violaceo et macula cubitali pallide badia distinguendus. Long. tot. 230 mm., al. 158, caud. 80, rostri culm. 26, tarsi 14." (A. B. Meyer.)

Hab. Huon Gulf, Bussum, Yakama, in N.E. New Guinea. This species also is known to me from the description only.

## Add: Page 419. Prioniturus mindorensis.

Prioniturus mindorensis, Hartert, Journ. f. Orn. 1891, p. 298 (♀).

Female. "Bill (in dry skin) white, grey towards the base. Grassgreen, paler underneath, and with a yellowish tinge especially on the abdomen, chin, and also cheeks; crown bluish violet; quills blackish, half of their inner web underneath blue; outer web above blue, changing into green, and narrowly edged with yellow (?); first quill entirely black; under wing-coverts green; tail black, tinged with green above, with blue underneath: irides whitish. Wing 16 cm. (=6.29 inches)." (Hartert.)

Add: Page 481. Ptistes erythropterus.

b'. 3 ad. sk.

Baudin Islands.

" Penguin" Coll.

## Add: Page 526. Loriculus mindorensis.

Coryllis mindorensis, *Hartert*, *Katal.* p. 253 (♀) (1891). Loriculus mindorensis, *Hartert*, *Journ. f. Orn.* 1891, p. 299.

Female. "Bill red with greyish tip; forehead broadly dark red; throat bluish; breast and under tail-coverts greenish yellow; abdomen pale green; quills black, with the outer web green and the inner one underneath blue; tail above dark green, blue underneath. Wing 9.8 cm. (=3.85 inches)." (Hartert.)

# Add: Page 530. Loriculus bonapartei.

a. ♂ ad. sk. Mainbum, Sooloo Isl., May 3, 1883 Hon. Walter Roth-schild [P.].
b. ♀ ad. sk. Iolo-Sooloo, April 18, 1887 (Plater Plater).
Hon. Walter Roth-schild [P.].

## Add: Page 567. Psephotus hæmatonotus.

Female. "The colour of the female is much duller, it has no yellow spot on the wing-coverts, nor crimson on the rump; the abdomen has only a tint of yellow." (Ramsay.)



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### GUIDE-BOOKS.

# (To be obtained only at the Museum.)

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- Guide to the Galleries of Mammalia (Mammalian, Osteological, Cetacean) in the Department of Zoology of the British Museum (Natural History). [By A. Günther.] 3rd Edition. Pp. 125. 57 Woodcuts and 2 Plans. Index. 1887, 8vo. 4d.
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